



SAROJINI NAIDU GOVT. GIRLS POSTGRADUATE (AUTONOMOUS) COLLEGE, BHOPAL (M.P.)
Programme Outcomes (PO) Programme Specific
Outcome (PSO)
Course Outcome (CO)

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Faculty of Arts

M.A. (Master of Arts)

Program Outcomes

1. The faculty of Arts offers P.G. in Drawing & Painting, Economics, English, Geography, Hindi, History, Library Science, Music, Political Science, Public Administration, Psychology, Sociology, Social work.
2. Students become competent teachers, psychologists, professional artists, and compete for UPSC/ State PSC exams for which they are trained & groomed by subjects like Public administration, Political Science, History, Sociology.
3. Study of language opens new avenues in Media, Mass communication and even to become Interpreters, Translators etc.
4. Students have channel to attempt for various competitive exams like NET/ SLET/ BANK/SSB, etc.
5. All the above-mentioned P.G. Subjects have wide range of avenues for research in diverse fields.
6. Provide intellectual skills necessary to develop incite for career opportunities.
7. Students will also develop knowledge of theoretical concepts and practical approaches.
8. Students will gain confidence to become entrepreneur in the areas of their interest.
9. Students will get in-depth knowledge in their respective subjects, so they will explore the vast avenues available to them.

M. A. DRAWING AND PAINTING Program Specific Outcomes

- M.A.(Drawing and Painting) courses of traditional laser where students would gain additional skills for creating art and are trained to use in a contemporary way according to the need.
- The students would learn about Indian and western schools of art.
- They learn different types of painting, crafts, printmaking and many more ideas to find the area that favours the expressive style.
- They get knowledge of varied art forms, painters and their paintings from diverse historical and contemporary contexts.

This course is designed

- To produce professional artists ,teachers for educational institutes (schools and colleges)
- To train the students for entrepreneurship and vocational guidance.
- To train them get self employment, thus preparing them for financial freedom.

COURSE OUTCOMES

SEMESTER I

PAPER I : HISTORY OF INDIAN PAINTING

Students will gain knowledge of

- The beginning and growth of art with prehistoric man's life, cultural growth and advancement to the extent of Indus valley civilization.
- The knowledge and description of all cave paintings from start to the highest level as of Ajanta. Ajanta is worldwide famous for its subject matter, characteristics, methods - techniques and for its beautiful designs.
- Indian art was live even when there was great political chaos only the mode of presentation and exhibition was changed. Necessity created miniature art. The styles developed then had their own characteristics and differences. So all styles were unique in themselves like- Pal, Jain (Apabhramsa), Mughal, Rajasthani, Pahari etc.
- The changes which enveloped Indian art and slowly changed it all over with influence of Britishers but without disturbing the soul of India is remarkable. The art styles of modern period artists and their contributions are of great importance.

PRACTICAL I : TRADITIONAL PICTORIAL COMPOSITION

Students study and learn different theories relating composition and practice their implementations. They would learn the use of different medium such as oil acrylic and mixed media.

LEARNING OUTCOMES :-

- ❖ knowledge of various traditional and creative methods, innovative uses of different techniques for creating their own pictorial compositions in the given subjects.

	❖ The whole process of different level practices (with different poses of figures, background and foreground, arrangements & colour combinations can help the student to become perfect in painting.
PRACTICAL II :DRAWING OF HUMAN FIGURE	<ul style="list-style-type: none"> ➤ Students come to know the anatomy of human figure and learn to draw according to anatomical study. ➤ Students learn to draw different poses of human figures (male and female both) of all ages, which help them in creating their own compositions and prepare them for their next level paper i.e ' life study.' ➤ They learn to draw and paint the effect of light and shade on the human body thus learn to paint with realistic approach. <p>LEARNING OUTCOMES :-</p> <p>By becoming a freelance portrait artist or composition artist can be self dependent financially.</p>
PRACTICAL III : FOLK ART	<ul style="list-style-type: none"> ➤ Knowing the life art and culture of folklore of India. ➤ Knowing about variety of folk art and learning their ways of making and use it in modern times with necessary innovations according to the needs. ➤ Complete knowledge of different folk art forms from different parts of India such as Mandana, Godna, Chitrawan, Alpana etc. <p>LEARNING OUTCOMES :-</p> <p>By becoming a freelance portrait artist or composition artist can be self dependent financially.</p>
SEMESTER II	
PAPER I : HISTORY OF EUROPEAN PAINTINGS	The students would be able to identify the artworks and understand the growth of European painting. Students would be able to know analytical and critical study of styles and trends from prehistoric to Gothic art
PRACTICAL I : PORTRAIT PAINTING	Students would gain knowledge of details of face, their features, expressions and feelings. They learn to draw and paint Portraiture of male and female (of all ages) using various mediums from crayons, dry pastels to acrylic and mix media.
PRACTICAL II : LANDSCAPE	<ul style="list-style-type: none"> ➤ Students learn to observe the nature and scenery. ➤ They learn to select what to paint from the whole visible scenario. ➤ They learn to paint landscape in different mediums and styles. ➤ This field work sharpens their realistic approach and at the same time it helps strengthen their imagination so as to use the scenery for the background of a composition.

PRACTICAL III : PRINT MAKING (wood cut, linocut or available print medium)	<ul style="list-style-type: none"> ➤ The students would be able to get basic knowledge of printmaking. ➤ They would learn different techniques and methods used in wood cut/linocut printmaking. ➤ By thorough practice, they master the equipments and inks used in the process.
SEMESTER III	
PAPER I : CRITICISM AND PHILOSOPHY OF ARTS	<ul style="list-style-type: none"> • The students would know art & beauty and their relationship through philosophy. • They come to know and understand all thoughts explained by the Indian and western thinkers. • Through this they learn the application of art and the intricacies of it.
PAPER I OR DISSERTATION	Students come to know all the process of research work step by step from choosing the topic till the end where the student gives a presentation in front of the experts.
PRACTICAL I : COPY FROM OLD MASTERS	<ul style="list-style-type: none"> ➤ Students would be able to know the works of Indian and western great masters, their style, techniques, details and main features. ➤ They would learn copying through grid making and freehand. ➤ All this learning helps them in mastering different techniques of copying to get commission work from the market
PRACTICAL II : FULL FIGURE FROM LIFE	To make the student draw and paint the human figures of all ages (male-female) with realistic approach. This helps mastering human figures with all possible poses to add them in their compositions.
PRACTICAL III : TRIBAL ART	<ul style="list-style-type: none"> ➤ Students would acquire all the knowledge about various tribes of India, their life, festivals, beliefs, cultural details , their various art forms and related stories. ➤ They learn the technical details of making tribal art ➤ This knowledge helps them understand and preserve the vanishing art of our tribes through various practices such as projects, research and practical work.
SEMESTER IV	
PAPER I :MODERN PAINTING OF EUROPE	<ul style="list-style-type: none"> • Students would come to know the rise of isms in art, the history of modern painting and painters, the art movements in Europe. • They would know the impact of this movement on the world art as a whole and specifically on Indian art scenario. • Practically they inherit the methods of different modern styles and use them in their creation uniquely. • This helps them in many ways in earning through art and surviving in art market prevailing in the society thus making them financially free.

PRACTICAL I : CREATIVE PORTRAIT OR PROFESSIONAL ART	<ul style="list-style-type: none"> ➤ Students would learn the ways to use previously learned all techniques of realistic portraiture to convert them in to creative portraiture. This enhances their imagination power immensely. ➤ Through professional art study, the students learn the necessary skills and creative imagery to use in media, hoardings, advertising etc. ➤ This creative visualisation and developed skill will provide financial strength to the students.
PRACTICAL II : CREATIVE COMPOSITION	<p>It sharpens the imagination and the use of the knowledge gathered and skills learnt till now creatively in their own way which help to create their identity in the art world and art market through painting.</p>
PRACTICAL III : MURAL PAINTING OR SILK SCREEN PRINTING	<ul style="list-style-type: none"> ➤ This is a very vastly used process in art and art market for different purposes. ➤ Learning the process and mastering in this field the student would undoubtedly be economically free.

M.A. (Economics) Program Specific Outcomes-

- To provide a well resourced learning environment for student.
- Students of economics can pursue higher studies (M.Phil., Ph.D) to attain research positions.
- The study of economics provides students a systematic framework for analyzing researching, writing and teaching about a wide array financial and regional economic issues.
- Economics enables learners to build up a professional careers as economists, financial advisors, economic planners and policy makers. It prepares them to cope up with stress and strain involved in the process of economic development.
- Students will be understand the wide potential of the subject economics and its implementation in day to day life as well as sustainable development.

COURSE OUTCOMES

SEMESTER-I

Paper I Advance Economics Analysis-I	<p>The objective of this course is to impart knowledge of economics as a subject and its importance in business demand and supply functions, forecasting demand, production, costs will make them aware of various operations carried in business.</p> <ul style="list-style-type: none">➤ Students will be able to understand the demand and supply analysis in business applications.➤ Students will be able to understand the concepts of cost, nature of production and its relationship with business operations.
Paper II Macro Economics	<p>The objective of this course is to understand the functioning of economy at the macro level and study how the economy is regulated through monetary and fiscal policies.</p> <ul style="list-style-type: none">➤ Students will be able to understand the methods of calculating national income and concepts related to it.➤ Students will be able to associate the current economic phenomenon with existing theory and put their views on contemporary economic issues.➤ Students will be able to understand factors determining national income such as consumption, saving and investment.➤ Students will be able to analyse the income determination through classical and Keynesian economics.
Paper III Public Economics	<p>The objective of this course is to study the role of govt. and the different ways in which govt. policies affect the economy. it develops an analytical framework that facilitates the evolution of public policy.</p> <ul style="list-style-type: none">➤ Student will be able to analyse the implications of countries stock of public debt➤ Students will be able to explain the principles of optimal taxation.
Paper IV Quantitative Technique	<p>The objective of this course is to demonstrate sound knowledge of fundamental of statistics and statistical techniques of the students.</p>

	<ul style="list-style-type: none"> ➤ Students will be able to understand various quantitative & statistical methods. ➤ Students will be able to calculate and interpret statistical values by using statistical tool (correlation & regression) for research purpose. ➤ Students will be able to demonstrate an ability to apply various statistical tools to solve business problems.
SEMESTER-II	
Paper I Advance Economic Analysis - II	<p>Objective of this course is to impart the knowledge of various market structures and different pricing techniques. It will help the students to understand day to day business decision taken by different firms in social and ethical manner keeping in mind the consumer behaviour.</p> <ul style="list-style-type: none"> ➤ The students will be able to apply marginal analysis to the firm under different market conditions. ➤ The students will be able to analyse the causes and consequences of different market conditions. ➤ The students will be able to integrate the concept of price and output decision of firms under various market structure
Paper II Monetary Economics and Banking	<p>The objective of this course is to study the role played by bank in modern monetary economies and financial markets.</p> <ul style="list-style-type: none"> ➤ Students will have the knowledge and skills to understand several key models and concepts of monetary economics and banking theory/system. ➤ Students will be able to understand the monetary transmission mechanism whereby decisions made by the monetary authorities concerning money supplies or interest rates can have real effects on the economy.
Paper III Research Methods & Statistical Inference	<p>The objective of this course is to provide knowledge of some basic concepts of research and its methodologies.</p> <ul style="list-style-type: none"> ➤ Students will understand the basic concepts of descriptive and inferential statistics.. ➤ It will help students to understand the term population, sample and describe the steps involved in the process of sampling. ➤ Students will be able to select and define appropriate research problems and parameters. ➤ Students will be able to write research report and thesis
Paper IV International Economics	<p>The objective of this course to provide a critical overview of theoretical empirical and policy issues relating to international economics.</p> <ul style="list-style-type: none"> ➤ Students will be able to get acquainted with economics concepts and models of International trade. ➤ Students will become aware about international trade blocks and their importance. ➤ Students will be have the knowledge of foreign payments balance

		<ul style="list-style-type: none"> ➤ Students will gain the knowledge of the relationship between international economics and economic development.
SEMESTER-III		
Paper I History of Economics Thoughts		<p>The objective of exposing students to the history of economic thought is to develop their ability to critically assess the strengths and weaknesses of economic ideas, both in the past and in the present.</p> <ul style="list-style-type: none"> ➤ The study of Economic Thoughts will help the students to understand the origin of economics ➤ Study will help students to provide a broad basis for comparison of different ideas. ➤ It will enable students to have a well-balanced and reasonable judgement.
Paper II India's Foreign Trade & International Institution		<p>The objective of this course is to clarify the conceptual background of foreign trade and explain the significance and benefits of global business operations.</p> <ul style="list-style-type: none"> ➤ Student will be able to integrate international business concepts with functioning of global trade. ➤ Students will be able to apply suitable Trade method to manage foreign trade in India. ➤ Students will be able to have the knowledge about exchange rate which is determined and trade takes place on the basis of exchange rate. ➤ Students will be able to aware of the changes in the composition as well as direction of foreign trade after international trade and know the causes and effects of deficits in the balance of payments measures adopted to correct the deficit and identify the need for having trade reforms.
Paper III Labour Economics		<p>The course aims to provide the students with a solid introduction to labour economics, specially with respect to the employment relationship and investment in human capital.</p> <ul style="list-style-type: none"> ➤ The course makes students aware of different theories on labour and employment from the point of view of economic research ➤ It provides a detailed analysis on the latest development of labour market in developing countries with reference to India ➤ Students will be able to describe key features of labour market, analyse models of the labour market.
Paper – IV Industrial Economics		<p>Objective of this course is to give wide outlook of the economic analysis of industry and attempts to provide satisfactory explanations of the ways in which economic forces operate within the industrial sector.</p> <ul style="list-style-type: none"> ➤ Students will be able to trace beginning and development of industrial economics . ➤ Gives knowledge to the student about firms, industries and market.

	➤ Imparts awareness in learners about the analysis of different market structure and their implications on economic welfare.
SEMESTER-IV	
Paper I Economics of Growth & Development	<p>Objective of this course is to introduce students to the theories, challenges and policies of development economics and to develop their ability to apply the theories to explain real world cases.</p> <ul style="list-style-type: none"> ➤ Students will be able to apply an analytical framework to understand the important structural characteristics of development. ➤ Students will be able to discuss the important models and theories in economic development and their policy implications.
Paper II Indian Economic Policy & Issues	<p>The objective of this course is to equip the students with the theoretical, empirical and policy issues relating to the society, policy and economy of India.</p> <ul style="list-style-type: none"> ➤ It will result in comprehensive understanding of Indian Economy ➤ Student will be able to develop ideas of the basic characteristics of Indian economy, its potential on natural resources. ➤ Students will be able to understand the importance causes and impact of population growth and its distribution translate and relate them with economic development. ➤ Students will be able to identify and analyze current issues. <p>Students will be able to understand the International trade and to examine the impact of the trade policies on the dynamic gains</p>
Paper III Agricultural Economics	<p>Objective of the study is to provide details views of the process of agricultural development in the country since independence</p> <ul style="list-style-type: none"> ➤ Students will be able to understand the issues and challenges faced by agricultural sector in India ➤ Student will be able to acquire knowledge and analytical skill in addressing the issue of agricultural marketing. ➤ Student will learn about the rich natural endowments to achieve sustainable agricultural development ➤ Students will be able to learn causes of regional variations in productivity and production, social and economic inequality size of land holdings and lack of quality inputs etc and suggest appropriate measures for the whole economy
Paper – IV Demography	<p>Objective of the study is to make the students aware of the importance of population in economic development and the various theories related to growth of population in a country :-</p> <ul style="list-style-type: none"> ➤ Students will be able to understand the quantitative and qualitative aspects and characteristics of the population through various demographic techniques. ➤ The students will be able to produce population projections and interpret the information gathered by the different demographic methods. ➤ Students will be able to recognize and analyse typical demographic patterns arising from the data.

M.A. (ENGLISH LITERATURE) Program Specific Outcomes-

The course is planned -

- To equip students with linguistic skills and nuances of literature
- To empower them with critical thinking
- To understand analyse and evaluate cultures, trends and wisdom of people of different societies in different ages.
- To promote career readiness in students
- Media, journalism and publishing are some job options for PG in English.
- Students can make their career in Teaching and Academic sector.
- Advertising, Marketing and PRs can also be a fruitful career option for the scholars of PG in English.
- Students can also opt for becoming Translators, Interpreters, Digital Copywriters and Content writers.

COURSE OUTCOMES

M.A. PREVIOUS

Paper I - Poetry	<ul style="list-style-type: none">• Poetry enables the students to develop and understanding of rhyme, rhythm, metre prosody through various themes.• It enriches their language skills.• Translation in literature helps them to get acquainted with world literature , literature through the ages• Skill of self expression is enhanced.
Paper II - Drama	<ul style="list-style-type: none">• Helps students understand main ideas and details in different kinds of dramatic scripts.• Improve listening skills and prepare students further to face competitive challenges.• It improves the comprehensions skills of students.• It also provides impetus open classroom discussion.
Paper III - Fiction	<ul style="list-style-type: none">• Fiction creates a sense of curiosity in budding scholars• It widens their horizons of learning and understanding of human relationship.• It helps students to inculcate the art of moralizing and idealizing the heroes.
Paper IV - Prose	<ul style="list-style-type: none">• Students learn to read with correct pronunciation, stress, intonation and articulation.• It enriches their active and passive vocabulary.• It helps to develop their imagination.• It also prepares the students for world citizenship.• Students are acquainted with practical wisdom.

M.A. FINAL

Paper I - Critical Theory	<ul style="list-style-type: none">• It is an approach to the study of literature.• It develops an analytical approach on how to study and appreciate literature• It also develops an analytical approach towards socio-political structure of society.
Paper II - English	<ul style="list-style-type: none">• Linguistics enhances speech skills and pronunciation of students

Language	<ul style="list-style-type: none"> • It is an approach to scientific study of language. • It enhances language skills in the scholars. • It helps students with language skills in the context of global scenario.
Paper III - Indian Writing in English	<ul style="list-style-type: none"> • It helps students acquaint with post colonial and partition literature. • It helps to trace the development of Indian Literature in English. • To apprise students of Indian Ethos
Paper IV - American Literature	<ul style="list-style-type: none"> • It helps to acquaint learners with global literature. • It enables students to comprehend literary, societal, cultural, biographical and historical background of writings that constitute American Literature.

M.A. (Geography) Program Specific Outcomes-

- Understand the position of geography among the earth sciences and its importance and interrelationship.
- Have in-depth knowledge in Physical Geography particularly formation of land form and its association, processes, world distribution of flora and fauna and their factors , Marine resources etc.
- Acquire knowledge on elements & factors of climate and its influence on humankind in a global prospective.
- Assess man-nature relationship and resource management
- Acquire knowledge of physical environment and its role in managing biodiversity along with human impact on different environments. Environmental Impact Assessment.
- Handle population data including estimation of population growth, population policies.
- Handle statistical data and their interpretation
- Prepare maps of different themes
- Earn knowledge on recent space technology including interpretation of satellite imagery aerial Photographs, GIS and GPS.
- Acquire expertise in survey work by using Plane Table, Prismatic Compass Dumpty level and Theodolite and subsequently able to prepare map on local level for the planning.

COURSE OUTCOMES**SEMESTER-I**

Paper I Geomorphology	Learning Outcomes: After the completion of course, the students will have ability to: <ul style="list-style-type: none">➤ Understand the functioning of Earth systems in real time and analyze how the natural and anthropogenic operating factors affects the development of landforms➤ Distinguish between the mechanisms that control these processes➤ Assess the roles of structure, stage and time in shaping the landforms, interpret geomorphologic maps and apply the knowledge in geographical research.
Paper II Economic Geography	Learning Outcome: After the completion of course, the students will have ability to: <ul style="list-style-type: none">➤ Distinguish different types of economic activities and their utilities.➤ Appreciate the factors responsible for the location and distribution of activities.➤ Examine the significance and relevance of theories in relation to the location of different economic activities.
Paper III Geography of India Physical and Resources	Learning outcomes: After the completion of course, the students will have ability to: <ul style="list-style-type: none">➤ Understand the physical profile of the country➤ Study the resource endowment and its spatial distribution and utilization for sustainable development➤ Synthesize and develop the idea of regional dimensions.
Paper IV History of Geography thought	Learning Outcome: After the completion of course, the students will have ability to:

	<ul style="list-style-type: none"> ➤ Distinguish the paradigms in geography discipline through time ➤ Understand the geographical thinking in different regions of world ➤ Appreciate the past and future trends of world geography in general and Indian geography in particular
Paper V Field Techniques, Surveying and Research Methods (Practical)	<p>Learning Outcome: After the completion of course, the students will have ability to:</p> <ul style="list-style-type: none"> ➤ Conduct proper field work for the collection of primary data to bring out grassroots realities. ➤ Make use of proper tools and surveying methods for measurement in context of collection and processing of data. ➤ Prepare a report based on field data.
SEMESTER-II	
Paper I Climatology	<p>Learning Outcomes: After the completion of course, the students will have ability to:</p> <ul style="list-style-type: none"> ➤ Understand the elements of weather and climate and its impacts at different scales. ➤ Comprehend the climatic aspects and its bearing on planet earth. ➤ Have sound knowledge of world climate regions.
Paper II Resource Management	<p>Learning Outcome: After the completion of course, the students will have ability to:</p> <ul style="list-style-type: none"> ➤ Understand the dynamic interactive relationship between man and environment. ➤ Have sound understanding on distribution, utilization and proper management of natural resources at global level. ➤ Make assessment and review of planning and policies related to environment and natural resources
Paper III Geography of India	<p>Learning Outcome: After the completion of course, the students will have ability to:</p> <ul style="list-style-type: none"> ➤ Understand the Indian agriculture and related issues and regionalization of agriculture. ➤ Appreciate the factors responsible for location and distribution of industries in India. ➤ Synthesize and develop the idea of regional dimension.
Paper IV Geography of Environment	<p>Learning Outcome: After the completion of course, the students will have ability to:</p> <ul style="list-style-type: none"> ➤ Understand the dynamic interactive relationship between man and environment. ➤ Have sound understanding on distribution, utilization and proper management of natural resources at global level. ➤ Make assessment and review of planning and policies related to environment and natural resources
SEMESTER-III	
Paper I Oceanography	<p>Learning Outcomes: After the completion of course, the students will have ability to:</p> <ul style="list-style-type: none"> ➤ Understand the elements of ocean and topography of ocean bottoms.

	<ul style="list-style-type: none"> ➤ Understand the oceanic process. ➤ Study the resources stored in the oceans.
Paper II Urban Geography	<p>Learning Outcome: After the completion of course, the students will have ability to:</p> <ul style="list-style-type: none"> ➤ Understand the fundamentals and patterns of urbanization process ➤ Learn the functional classification of cities and Central Place Theory ➤ Know contemporary problems of Delhi, Mumbai, Kolkata and Chennai
Paper III Geography of Tourism	<p>Learning Outcome: After the completion of course, the students will have ability to:</p> <ul style="list-style-type: none"> ➤ Equip with a basic understanding of nature and scope, trends and patterns of various types of tourisms. ➤ Have sound knowledge on geographical, environmental and socio-cultural aspects of tourism in India. ➤ Apply the principles of Geo-tourism and analyse the prospects and problems associated with pilgrimage tourism.
Paper – IV Agricultural Geography	<p>Learning Outcome: After the completion of course, the students will have ability to:</p> <ul style="list-style-type: none"> ➤ Conceptualize the agriculture and its determinants. ➤ Get the overview of Indian and World agriculture regions and systems. ➤ Have sound knowledge of agriculture revolutions and food security
SEMESTER-IV	
Paper I Research methodology in Geography	<p>Learning Outcomes: After the completion of course, the students will have ability to:</p> <ul style="list-style-type: none"> ➤ Understand the basics of data collection and, processing for the meaningful outcomes ➤ Understand the selection of proper sampling techniques for the collection of data ➤ comprehend the representation and interpretation of the result.
Paper II Remote sensing in GIS	<p>Learning Outcomes: After the completion of course, the students will have ability to:</p> <ul style="list-style-type: none"> ➤ Appreciate the strength and application of remote sensing ➤ Map the resources, their location and availability ➤ Apply this knowledge for sustainable development ➤ Have comprehensive understanding of GIS for construction of maps and their use in developmental planning.
Paper III Geography of Population	<p>Learning Outcome: After the completion of course, the students will have ability to:</p> <ul style="list-style-type: none"> ➤ Learn the role of demography and population studies as a distinct fields of human geography ➤ Have sound knowledge of key concept, different components of population along with its drivers ➤ Examine population dynamics and characteristic with contemporary issues
Paper – IV Regional planning and development	<p>Learning Outcomes: After the completion of course, the students will have ability to:</p> <ul style="list-style-type: none"> ➤ Identify notable lagging regions and solutions for their overall

	<p>development</p> <ul style="list-style-type: none"> ➤ Have comprehensive understanding regarding the different regions and application of different models and theories for integrated regional development. ➤ Select appropriate indicators for the measurement of socio-economic regional development.
Paper – V Bio Geography	<p>Learning Outcome: After the completion of course, the students will have ability to:</p> <ul style="list-style-type: none"> ➤ Familiarize with forests and there major communities. ➤ Understand the relationship between zoogeography region and their environment. ➤ Assess of different aspects of floral and faunal provinces.
Paper – VI Geography of health	<p>Learning Outcome: After the completion of course, the students will have ability to:</p> <ul style="list-style-type: none"> ➤ Understand the key concepts related to health and its driving forces ➤ Identify the linkages between the health, environment, exposure and risk. ➤ Explain the relationships among health and disease pattern in environmental context with reference to climate change.
Paper – VII Geography of manufacturing	<p>Learning Outcome: After the completion of course, the students will have ability to:</p> <ul style="list-style-type: none"> ➤ Understand the theories and models of industrial location and their application. ➤ Analyze and understand the special pattern and distribution of manufacturing industries. ➤ Explain the relationship between manufacturing industries and industrial hazard and environmental degradation.
Paper – VIII Political Geography	<p>Learning Outcome: After the completion of course, the students will have ability to:</p> <ul style="list-style-type: none"> ➤ Have comprehensive understand of GIS for the construction of maps and their use the development planning. ➤ Have knowledge of using GPS & DGPS for the accurate location ➤ Apply the GIS science platform for the monitoring and forecasting analysis

M.A. Hindi Program Specific Outcomes

The college provides a Post Graduate course in Hindi Literature. The various aspects of literature like poetry, drama, prose and fiction familiarizes us with different facets of society, and encourages us to strive towards a better world. Studying Hindi literature not only introduces us to ancient Indian culture, it also broadens our perspectives and opens up various job opportunities in the field of translation. It helps us to connect spiritually with our roots.

COURSE OUTCOMES

M.A. Previous Hindi

Paper I Praachin evam Madhyakaleen Kavya tatha uska Itihaas	<ul style="list-style-type: none">➤ To familiarize students with basics of ancient and medieval poetry.➤ To provide better understanding on evolution of poetry.
Paper II Adhunik Hindi Gadya aur uska Itihaas	<ul style="list-style-type: none">➤ To acquaint students with history of prose in India.➤ To throw light on development of prose in India.➤ To disseminate knowledge of modern Hindi prose among students.
Paper III Bhartiya evam Paashchatya Kavyashastra	<ul style="list-style-type: none">➤ To develop analytical skills on comparative studies.➤ To accustom the students with literature around the world.➤ To help students understand the commonalities of world literature.
Paper IV Prayojanmoolak Hindi	<ul style="list-style-type: none">➤ To introduce students to various job opportunities in Hindi sector.➤ To acquaint students with self-employment opportunities.➤ To familiarize students with applications of language in contemporary times.

M.A. Final Hindi

Paper I Adhunik Hindi Kavya aur uska Itihaas physiology & endocrinology	<ul style="list-style-type: none">➤ To trace history and evolution of contemporary Hindi poetry.➤ To throw light on contemporary Hindi poetry.➤ To elucidate on the socio-political relevance of poetry.
Paper II Bhasha Vigyan evam Hindi Bhasha	<ul style="list-style-type: none">➤ To explain the technical aspects of language.➤ To trace the development of Hindi language.➤ To make students familiar with the technicalities of Hindi language.
Paper III Hindi Sahitya ka Itihaas	<ul style="list-style-type: none">➤ To trace the roots of Hindi literature.➤ To explain development and growth of Hindi literature.➤ To derive contemporary implications of Hindi literature.
Paper IV Surdas	<ul style="list-style-type: none">➤ To introduce students to Bhakti movement.➤ To acquaint students with writing styles of Surdas.➤ To throw light on the contemporary appeal of the poet.

M.A.I (History) Program Specific Outcomes

Being a subject of social science, history has its own value in society and human life. It helps the students to develop their ethical and social value. They could gather knowledge about the heritage and tradition of their own country and the others. There is huge potentiality in future of a history student. Various options are opened to history students to choose their career. First of all, history is a subject from primary education level to higher study, so they can engage themselves in teaching profession in primary, secondary and post-secondary schools. History is also helpful for those who are preparing for WBCS and SSC. A history student may choose his or her career in journalism or any other editorial board. They may get job in museum, archives and libraries. Beside those, in the field of research and archaeology they may proceed.

COURSE OUTCOMES

SEMESTER-I

Paper I Historiography, Historical Concepts, Methods and Tools	<ul style="list-style-type: none">➤ Students will be able to identify and describe the continues and stakes off conversations among historians within define historiographical fields.➤ Students will learn to apply historical methods to evaluate critically the record of the past end how historians and others have interpreted it.➤ Students will acquire basic historical research skills including appropriate and effective use of libraries archives and databases.➤ Students will learn to organise and express their thoughts clearly and coherently both in writing and orally.➤ Student should demonstrate their mastery of the knowledge and skills involved in historical practice by conceptualizing and executing a significant piece of original research.
Paper II Twentieth Century World	<ul style="list-style-type: none">➤ Students will understand the relation between modernity and nationalism and its implications .➤ Students will understand the process of colonialism in different parts of the world.➤ students will understand the problems of contemporary world in the light of its background history.➤ Students will understand the necessity of Universal Brotherhood.
Paper III – History of India (1757- 1857 A.D.)	<ul style="list-style-type: none">➤ Students will develop a holistic critical understanding of the social, economic, political, military and cultural conditions prevalent in India (1757-1857).➤ The course will enable the students to understand the evolution of British policy in India with reference to the key concepts of modern Indian colonial history like Colonialism, Indology, Paramountcy, Orientalism and Utilitarianism.➤ While examining the Indian responses to the establishment of British power in India the students will learn more about the central concerns of social reform initiatives, popular protest, military organization and education.
Paper IV History of India (1858-1975 A.D.)	<ul style="list-style-type: none">➤ Students understood the Socio-economic, cultural and Political background of Modern India.➤ Students have understood process of rise of Modern India.

	<ul style="list-style-type: none"> ➤ Students have understood the process of healthy Nationalism and Secularism by studying work of social reformer and freedom fighters. ➤ Students became familiar with makers of Modern India.
Paper V – Freedom Movement in Madhya Pradesh (1857-1947 A.D.)	<ul style="list-style-type: none"> ➤ The Early history of Madhya Pradesh. ➤ They would also be able to know the different dynasties ruled in Madhya Pradesh. ➤ They would learn about the national movements in Madhya Pradesh. ➤ They would have a comprehensive knowledge of the administration changes in Madhya Pradesh through nineteenth century. ➤ It will help to understand the history of Madhya Pradesh which became important in the course of history.
Paper VI – World History (18th & 19th Centuries)	<ul style="list-style-type: none"> ➤ The Students will learn about the theory and practice of ultra-nationalism as a phenomenon produced by modern European history. ➤ The Students will learn about the connections between Feudalism, Capitalism, Socialism, Racism, Colonialism and Ultra-Nationalism. ➤ They will also learn about generic Fascism and country specific ultra-nationalism in relation to cultural comparisons across the countries chosen. ➤ One important outcome of the course will be a greater understanding of the cause and effect relationship between ultra-nationalism after the first World-War. ➤ Finally, the students will be able to understand the ideological and historical connections between the currents of World History in the period 1919-1945 and the contemporary post World War.
Paper VII – History of Architecture of India	<ul style="list-style-type: none"> ➤ Students will be able to understand architectures in their religious regional and stylistic context. ➤ Students will be able to understand the importance of sources for the study of ancient Indian historical architecture. ➤ Students will learn the fundamental knowledge of free and protohistoric culture. ➤ They will understand the various aspects of Harappan culture. ➤ They will understand the cultural achievements of Sungas and Sathavahanas. ➤ They will also understand the cultural development during the 3rd century BC to 12th century A.D.
Paper VIII– Historical Application in Tourism	<ul style="list-style-type: none"> ➤ Specify the commonly understood definitions of tourism and tourist. ➤ Define hospitality. ➤ Gain knowledge about the origins of the tourism industry. ➤ Provide an overview of the economic, social, and environmental impacts of tourism worldwide. ➤ Understand the history of tourism development in India. ➤ Analyse the value of tourism in India.

M.A. (Music Vocal) Program Specific Outcomes

Vocal music is one of the most popular subjects of all times in which students can plan and apply their knowledge to create job opportunity for themselves.

The field of vocal music has vast applications in society from music therapy to create self employment to demonstrate technical skills.

COURSE OUTCOMES

SEMESTER- I

- The objective of this course is to impart very basic knowledge of Ragas so that students can assess and analyze their skills in this performing art.
- Then a deep study is made to apply the skills learned to demonstrate this art.
- A systematic study is then imported to prepare compositions and create new songs.

SEMESTER- II

- The objectives of this course is to acquaint students about our ancient times. They can utilize this knowledge to explain the rich traditions of Indian classical music.
- By utilizing the skill & knowledge earned the students will be benefited to identify career prospects in future.
- By comparing different music styles students can analyze and compile the similarities of Indian and western music hence broadning their knowledge.

SEMESTER- III

- The objective of this course is to prepare students about minute details of Raags & Taals so that they can plan and design new compositions.
- The vast applications of Vocal music in folk, classical, popular light classical etc. opens vast opportunities for students to plan their career and utilize their knowledge for self employment.
- By knowing about ancient history of Indian classical music the cultural heritage will be conserved by compiling the literature.

SEMESTER- IV

- The aim of this course is to enable students to demonstrate their learning's, utilize it to generate & create self-employment.
- Since this is a performing art so students are trained to learn skills, analyze themselves, apply it to perform and assess the final outcome is performances.
- Music brings an overall change in personality of a student. The courses are so designed that students evaluate their capabilities, utilize the knowledge earned to demonstrate it and assess themselves identify their shortcomings, plan for future and hence become a complete arson as a whole.

M.A. (Political Science) Program Specific Outcomes

- Students will gain an in depth holistic knowledge of the subject.
- They will be able to understand the political affairs at regional, national and international levels.
- Students will be groomed for undertaking advance research and register for a Ph.D. degree.
- A base would be prepared for those who want to take competitive exams.
- There are ample opportunities in the field of academics at school and higher education levels.
- Students can get job opportunities in the field of journalism, administrative services , NGOs and voluntary organisations, international organisations, embassies and consulates.
- After gaining knowledge of constitution and regional ,state and national politics , students can participate better in active politics consequently holding different political posts at various levels of the nation .

COURSE OUTCOMES

SEMESTER- I

Paper I- Modern Indian Political Thought:	<p>The objective of this paper is to give in-depth knowledge to the students about thought and views of Indian political thinkers. They will learn to appreciate the richness of Indian political thought and the social, political, moral values imparted through it. The students will also learn about the contribution of these thinkers in bringing about social reforms and ethics.</p> <ul style="list-style-type: none">➤ A spirit of nationalism is inculcated in the students and they are proud of their rich heritage and culture.➤ The diversity and variety in Indian thought is brought before them.➤ They learn about the concept of Vishwa bandhutva, Indian pattern of socialism and democracy.
Paper II- Comparative Politics:	<p>Comparative Politics is based on modern approaches of Political science which deal with comparative study of political institutions and activities. Outcome: By studying Comparative Politics students can be benefited as follows</p> <ul style="list-style-type: none">➤ They get an understanding of how various political activities influence decision making and other political processes of different political systems of the world➤ Since it is based on scientific study , it promotes the students to do scientific research on political behaviour of individuals and institutions which can ultimately lead to theory building in the subject
Paper III- International Politics and Contemporary Political Issues:	<p>It is the objective of this course to impart knowledge about theoretical and basic concepts of International Politics and its nuances. The purpose is that the students should know about concepts of imperialism, colonialism, and their new forms, and how they changed the fate of greater part of mankind. The students should learn about arms race, disarmament and regional cooperation. They should also learn about the issues and challenges like terrorism and environment.</p> <ul style="list-style-type: none">➤ This course sparks the interest of students in international issues and the politics that states indulge in.

		<ul style="list-style-type: none"> ➤ They learn about the why and how of international politics. ➤ They come to know the issues that threaten mankind and impact international politics and the efforts made to address them.
Paper IV- Major Ideas and Issues in Public Administration		<p>Objective: The objective of this course is to acquaint the students with various approaches and concepts of administration. They should know about the different perspectives adopted regarding administration. The purpose is also to teach students about bureaucracy in its characteristic forms, the challenges faced by it and its transformation to meet those challenges.</p> <ul style="list-style-type: none"> ➤ The subject matter of this course is very helpful for students who want to take civil services exams. ➤ They acquire theoretical and practical knowledge of administration. ➤ Students become acquainted with the theories of management and administration.
SEMESTER- II		
Paper I- Western Political Thought:		<p>Objective: The purpose of this course is to make the student learn about western political thought from ancient to modern thinkers. They should know about the emergence and roots of the subject and its subsequent development. The student should learn about the political thought during the medieval, renaissance and post renaissance period. They should be well versed with the views of social contractarians, utilitarians and idealists. They should understand the Marxian philosophy and its various forms. The students should be acquainted with the political philosophy of modern thinkers.</p> <ul style="list-style-type: none"> ➤ The student gets a holistic perspective of political thought that developed in the west from Plato and Aristotle to Rawls and Jean-Paul Sartre. ➤ They are able to appreciate and analyse various theories like that of Justice of Plato to Social Justice of Rawls.
Paper II- Politics of South Asian Countries (Pakistan, Bangladesh, Sri Lanka, Nepal):		<p>Objective: The objective of this course is to provide exposure to the students on India's prominent South Asian neighbouring countries and to know about the salient features of these countries.</p> <ul style="list-style-type: none"> ➤ The student will be able to have a better understanding of the political systems and the politics of these South Asian countries. ➤ They will be able to understand Indian foreign policy and diplomacy in South Asia.
Paper III- International Organisation:		<p>Objective: To introduce the students with the international organisations, particularly The United Nations, that gives provides a platform to all states and ensures international peace, security and development</p> <ul style="list-style-type: none"> ➤ The students come to know about the League of Nations and causes of its failure. ➤ They learn about the organisation and working about the United

		<p>Nations and its agencies.</p> <ul style="list-style-type: none"> ➤ They come to know that how disputes are settled through peaceful and forceful means. ➤ The students learn about the role of the UN as Peacekeeper and promoting disarmament.
Paper IV- Research Methodology:		<p>Objective: Research Methodology is an important course that promotes spirit of research in the subject. The objective is to provide a theoretical base for students who want to pursue research in the subject.</p> <ul style="list-style-type: none"> ➤ Their interest in research is generated. ➤ The student gets well versed in the methods, approaches and tools to be adopted in social science research. ➤ Their horizon of job opportunities is widened as they can get jobs in the field of academics and Non-governmental organizations.
SEMESTER- III		
Paper I- Indian Government and Politics		<p>Objective: To provide an in depth knowledge to the students about the forming of the Indian constitution and the structure of the Government. The objective is also to learn about the working of the Indian polity and the challenges confronted by it.</p> <ul style="list-style-type: none"> ➤ The students come to know about the supreme law of the land. ➤ Students become worthy and law- abiding citizens of the country. ➤ They become aware of their fundamental rights and duties. ➤ It promotes national harmony and strengthens the social fabric. ➤ Awareness about the maladies confronting the nation
Paper II- State Politics in India:		<p>Objective: To impart knowledge about the second tier of Indian federal system, i.e. the state, its structure and working. The objective is to teach students about the institutions at the state level and the agencies working there in. They should also know about the problems confronting the states.</p> <p>Outcome:</p> <ul style="list-style-type: none"> ➤ Students are able to understand structure and working of the state governments and appreciate the differences in various states. ➤ They come to know about the role of different staff agencies in the state. ➤ They also come to know the powers and position of the states, as determined by the constitution. ➤ Students would be motivated to enter politics and serve the people of their state. ➤ They will be inspired to undertake micro-level research in their state
Paper III- International Law:		<p>Objective: To introduce the students with the body of principles and rules regulating inter-state relations in times of war and peace. They should know about the rights and duties of states in the international community in order to establish global peace and respect for human rights.</p> <p>Outcome:</p> <ul style="list-style-type: none"> ➤ Students learn the about norms and principles that govern international behaviour of states.

	<ul style="list-style-type: none"> ➤ They learn about the pacific and forceful means of resolving disputes between states. ➤ Students become well versed in international law of peace and war. ➤ They get an understanding of humanitarian law and the law of the sea. ➤ With further specialization they can be employed in governmental and non-governmental international organizations
Paper IV- Indian Foreign Policy:	<p>Objective: To provide an insight into the Indian foreign policy from its inception to the present. The student should be able understand the areas of cooperation and hiccups in India's relations with the super powers. Emphasis is placed on understanding its relations with South-Asian neighbours over the period of time by extending a hand of cooperation for mutual good on the basis of equality and respect. Students should also know about the challenges confronting the Indian foreign policy.</p> <ul style="list-style-type: none"> ➤ Student starts understanding the Indian foreign policy and the implications of diplomatic moves made by the states. ➤ They come to know about the areas of cooperation and also the background of many ➤ disputes that continue to fester India's relation. ➤ Students are keen to know more about the politics and cultures of other countries. ➤ Some students are motivated to become career diplomats.
SEMESTER- IV	
Paper I- Federalism In India and Local Self Government	<p>Objective: It is the objective of this course to impart knowledge about various levels of Indian federal structure and strengthening of representative democracy at grass root level. They should be able to appreciate the typical nature of federalism in India and its operational parts.</p> <p>Outcome:</p> <ul style="list-style-type: none"> ➤ Student learns about the centre-state relations and the recommendations regarding that. ➤ They learn about constitutional amendments that resulted in the introduction of local self- government and rural and urban levels. ➤ It will encourage leadership among women in the local bodies and they will be motivated to give their services for the transformation of their areas.
Paper II- Government and Politics of Madhya Pradesh	<p>Objective: To impart knowledge about the formation and politics of Madhya Pradesh. The student should know about the various organs of government at the state level. They should be familiar with the administrative structure of Madhya Pradesh. They should be able to understand the emerging trends in state politics.</p> <ul style="list-style-type: none"> ➤ The student starts understanding the politics and emerging trends of Madhya Pradesh. ➤ They understand the power of representative democracy in the state and how it can bring about welfare for the people.

	<ul style="list-style-type: none"> ➤ On learning about the role of the Chief Secretary and the District Collector, the students would be inspired to join the civil services. ➤ They develop a special bonding with their state.
Paper III- Advance Political Theory	<p>Objective: To initiate the students into the political thought of thinkers of the twentieth century. This course helps students understand modern dynamics of political theory that is base on empirical analysis and modern approaches of the subject.</p> <p>Outcome:</p> <ul style="list-style-type: none"> ➤ Students will be able to apply these modern dimensions for studying the complex social environment in national and international spheres. ➤ It provides an opportunity to do research work in new trends of political theory and modern political thinkers.
Paper IV- Diplomacy and Human Rights	<p>Objective: The objective of this course is to provide the students an insight about Diplomacy, which is the main instrument of international relations. Human Rights has emerged as an important branch which is relevant to all mankind therefore students should have knowledge of the international instruments of human rights.</p> <ul style="list-style-type: none"> ➤ Students learn how States use various types of diplomacy to pursue their national interest. ➤ They come to know about the functions and duties of diplomats and their role in implementing foreign policy of a state. ➤ They understand the human rights ensured by the Universal Declaration of Human Rights and the variety of civil, political, social and economic rights protected by the Covenants. ➤ They could be motivated to start or work for non-governmental organisations in the field of human rights.

COURSE OUTCOMES

Paper I Cognitive Psychology	<ul style="list-style-type: none"> ➤ Understanding distinguishing features of information processing and knowledge development. ➤ Learning different methods to understand human mental processes, ranging from carefully controlled experimental conditions of the lab to the subjective method such as self report. ➤ Acquiring basic knowledge of core concepts in human cognition i.e., attention, memory, reasoning and decision making. ➤ Demonstrating appropriate skills essential in designing and conducting experiments in cognitive psychology. ➤ Applying the knowledge of cognitive processes to one's own personal life and to real life issues, like, improving memory, eye-witness testimony, multi-tasking etc.
Paper II Social Psychology	<ul style="list-style-type: none"> ➤ Understanding the key issues and theoretical concepts such as attitude, attribution, interpersonal attraction and socialization. ➤ Developing knowledge about social issues related to prejudice, stereotypes and discrimination especially with respect to Indian context. ➤ Developing insight for reducing racial prejudice, discrimination and promoting behavior contingent to national integration. ➤ Understanding formation and structure of group. Developing understanding of the group processes, such as, social facilitation, social loafing, polarization. ➤ Acquisition of knowledge of leadership, its styles, theories and characteristics of a successful leader.
Paper III Guidance & Counseling	<ul style="list-style-type: none"> ➤ Having a comprehensive understanding of the profession of counseling, particularly in the Indian context. ➤ Acquiring basic counseling skills of problem identification, and relationship building (e.g. empathy, listening, paraphrasing, unconditional positive regard). ➤ Demonstrating skills of helping clients to reduce negativity/maladaptive self-talk, and also learn skill of terminating the counseling relationship. ➤ Developing qualities of an effective counselor, such as, self-awareness, reflexivity, self-monitoring and objectivity. ➤ Helping clients having mild concerns in life; for instance, acting as peer counselors in the college/community.
Paper IV Developmental Psychology	<ul style="list-style-type: none"> ➤ Demonstrating an ability to understand and distinguish major theoretical perspectives and methodological approaches in human development. ➤ Developing an ability to identify the milestones in diverse domains of human development across life stages. ➤ Understanding the contributions of genetic, environmental and

	<p>socio-cultural factors towards shaping human development.</p> <ul style="list-style-type: none"> ➤ Acquiring an ability to decipher key developmental challenges and issues faced in adolescence, adulthood and old age. ➤ Understanding various types of personality tests including projective tests.
Paper V Clinical Psychology	<ul style="list-style-type: none"> ➤ Developing a foundational knowledge of Clinical Psychology, its historical development and professional ethics. ➤ Evaluate observational, clinical, and epidemiologic research approaches in clinical research. ➤ Understanding symptoms of major mental disorder and develop insight into history taking /case study. ➤ Developing competencies for assessing the psychological functioning of individuals through techniques such as psychological assessment, observation and interview. ➤ Developing sensitivity towards individual and cultural diversity and understanding its implication in clinical work, especially within the Indian context.
Paper VI Psychopathology	<ul style="list-style-type: none"> ➤ Developing familiarity with the current diagnostic systems: DSM V and International classification of Diseases (Mental Disorder section). ➤ Acquiring knowledge and skills for distinguishing normal and abnormal behavior and learn the criteria of determining abnormality. ➤ Acquiring knowledge about Anxiety Disorders, Trauma & PTSD (stress-related disorder). ➤ Understanding the major types of psychoses, personality disorders, and disorders related to alcoholism & substance abuse. ➤ Gaining an insight into various therapeutic approaches such as psychotherapy, behavior therapy, Yoga & meditation etc.
Paper VII Research method and statistics	<ul style="list-style-type: none"> ➤ Understand the basics of data collection and processing for meaningful outcomes. ➤ Identify inferential statistics based on the nature of the hypothesis and variables. ➤ Apply descriptive and inferential statistics in psychological research. ➤ Demonstrate skills of data entry, editing and analysis using statistical software. ➤ Comprehend the representation and interpretation of results.
Paper VIII Measurement & Statistics	<ul style="list-style-type: none"> ➤ Demonstrate knowledge in basic principles of psychological measurement and assessment. ➤ Demonstrate the steps and skills required to construct psychometric tests. ➤ Comprehend the various methods to establish reliability, validity and establish norms. ➤ Gaining knowledge about tests constructed for special population. ➤ Understand formation of questionnaire: types of questions and its applicability.

Paper IX Psychology of Personality	<ul style="list-style-type: none"> ➤ Discuss the various systems and operating trends for theories: Structuralism, Functionalism, Behaviorism and Psychoanalysis. ➤ Critically evaluate different theories in the background of empirical evidence. ➤ Discuss the genetic, psychological and socio-cultural factors which shape personality. ➤ Understand the application of personality assessment in clinical practice.
Paper X Health Psychology	<ul style="list-style-type: none"> ➤ Demonstrate understanding of biological, behavioral, cognitive and social determinants of health. ➤ Understand risk factors for health-compromising behaviors and applying strategies for health promotion across the lifespan. ➤ Demonstrate advanced knowledge of individual, group and community-based approaches to the prevention and management of major identifiable health conditions (both acute and chronic). ➤ Demonstrate the capacity to critically evaluate research in health psychology and use this knowledge to explain mind-body interactions. ➤ Imparting knowledge of the principles of health-care to consumers and professionals.

M.A. (PUBLIC ADMINISTRATION) Program Specific Outcomes

- The program provides a comprehensive knowledge of Public Administration as an independent subject.
- The knowledge acquired by the students about theories propounded by administrative thinkers help and prepare them into becoming able administrators.
- These administrative theories also help a student who aspires to work in the private sector in managerial capacities.
- It sensitizes the students to the conditions of the deprived and weaker sections of the society and what can be done to improve their lot.
- The program provides an exposure to the students about the administrative institutions of other developed and developing countries.

COURSE OUTCOMES

SEMESTER- I

Paper I- Administrative Thought and Principles:	I- and	<p>Objective: It is the objective of this course to introduce the student with the views of ancient administrative thinkers and the beginning of Public Administration as an independent discipline. Knowledge is imparted about the views of other thinkers and theorists who enunciated administrative and management theories.</p> <ul style="list-style-type: none">➤ The course forms a firm base for the student regarding administrative thought and management theories.➤ They are able to comprehend how the organisations commonly work on the basis of these thoughts.➤ A big chunk of the syllabi for civil services exams gets covered.
Paper II- Comparative Public Administration:		<p>Objective: To introduce a comparatively recent branch of Public Administration which studies the administrative features of various developed and developing states on the basis of different approaches and models.</p> <ul style="list-style-type: none">➤ The student learns about the approaches to study comparative public administration.➤ They are able to understand and make a comparative study of the administrative systems of U.K., U.S.A. and France➤ They come to know the importance of accountability and control over administration.
Paper III- Public Personnel Administration:	Public	<p>Objective: No administration is possible without professional and well-trained personnel. This course brings forth the evolution of bureaucracy, the various methods of recruiting the civil services and the benefits that are accorded to them.</p> <ul style="list-style-type: none">➤ As most students of Public Administration aspire to enter into the administrative services, this course is of direct relevance to them.➤ They learn about the importance of ethics and integrity in administration.

		<ul style="list-style-type: none"> ➤ They come to know about the role of civil services in contemporary administration.
Paper IV- Urban and Rural Administration:		<p>Objective: To impart general knowledge about the rural and urban administrative system in India. Students should learn about the organisation, working and challenges of the local bodies. They are introduced to the features of local self-government in other developed countries.</p> <ul style="list-style-type: none"> ➤ Students come to know about the rise and importance of local self-government. ➤ They come to understand the 73rd and 74th constitutional amendments. ➤ They start understanding the basics of urban and rural administrative bodies, their way of functioning, urbanization, problems and solutions.
SEMESTER- II		
Paper I-Theory of Public Administration:		<p>Objective: It is the objective of this course to introduce the students to the theories enunciated by administrative thinkers, deduced on the basis of their observation and experiences.</p> <ul style="list-style-type: none"> ➤ After taking this course the student who enters government service has a fairly good idea about administrative organisation and its functions. ➤ The various theories brought forth by administrative thinkers guide and train a student into becoming an able administrator even before entering the field of administration. ➤ The theories propounded by administrative thinkers are relevant and useful in present times.
Paper II- Development Administration:		<p>Objective: The objective of this course is to introduce the students to this new approach of administration, which is development oriented. They are introduced to the development related administrative machinery in the field.</p> <ul style="list-style-type: none"> ➤ The students are able to understand the difference between Development and Traditional Administration. ➤ They come to appreciate the importance of public participation in government programmes for development. ➤ The students learn about the role of women in development.
Paper III - Financial Administration:		<p>Objective: To provide knowledge about the importance of Budget and various types of budget. The course gives an introduction to financial administration in its entirety.</p> <ul style="list-style-type: none"> ➤ The students will be able to understand the basics of budgetary process system in India. ➤ They will also be able to know the financial committees and budget making process and its execution in Britain. ➤ Students learn about the audit and accounting process in India.
Paper IV- Social		<p>Objective: To introduce the students with the welfare nature of the state and</p>

Administration:	<p>how it reaches out to the weak and needy people of the society. Purpose is to impart knowledge about the welfare mechanisms and legislative initiatives taken by the state. and role of voluntary welfare organizations in this regard.</p> <ul style="list-style-type: none"> ➤ The student is sensitized to the needs of the weaker sections of the society. ➤ They are introduced to the social administration mechanism at the central and state levels. ➤ They come to know about the welfare legislations and policies of the government. ➤ They are motivated to work with welfare agencies, both governmental and non-governmental.
SEMESTER- III	
Paper I- Planning and Administration:	<p>Objective: The intent of this course is to make the student aware of the concept of planning and its various facets. They are made to understand the importance of planning in administration and its role in the development of India at various levels.</p> <ul style="list-style-type: none"> ➤ Students get to know what and how of planning. ➤ They understand the planned system of development followed in India and the role of planning commission in it. ➤ They get familiar with the planning agencies and their working at state and district levels.
Paper II- Public Enterprises:	<p>Objective: The objective of this course is to provide an overall idea of Public Sector Undertakings in India. Students are to be introduced to the different types of PSUs and their management. They should come to know the challenges faced by public enterprises.</p> <p>Outcome:</p> <ul style="list-style-type: none"> ➤ Students will be able to appreciate the role of public enterprises in India's development. ➤ It will enable them to understand the origin of PSUs in India, types of PSUs, their financial system and legislative and executive control over them. ➤ The students would be inspired to explore job opportunities in public enterprises.
Paper III- Research Methodology:	<p>Objective: Research Methodology is an important course that promotes spirit of research in the subject. The objective is to provide a theoretical base for students who want to pursue research in the subject.</p> <ul style="list-style-type: none"> ➤ Their interest in research is generated. ➤ The student gets well versed in the methods, approaches and tools to be adopted in social science research. ➤ Their horizon of job opportunities is widened as they can get jobs in the field of academics and Non-governmental organizations.
Paper IV- Public	<p>Objective: The concept of public policy forms an important area of study in</p>

Policy and Bureaucracy:	<p>today's public administration. Government's long range plans are reflected through public policies. Bureaucracy has an important role to play in the formulation and execution of policies. The objective is to impart holistic knowledge to the student about public policy.</p> <ul style="list-style-type: none"> ➤ The student learns about the very upcoming area of public administration that closely touch the lives of all individuals. ➤ They learn about distributive justice and resource allocation through public policy This would sensitize those students who plan to enter administrative services and play a role in policy formulation, execution and assessment. ➤ They come to understand the changing role of bureaucracy as per the demand of times.
SEMESTER- IV	
Paper I- Public Administration in India:	<p>Objective: The intent of this course is to impart knowledge regarding origin and evolution of Public Administration in India. They should understand the functioning of various administrative agencies in Indian federal structure.</p> <ul style="list-style-type: none"> ➤ Knowledge acquired through this course will be immensely beneficial for students preparing for competitive exams conducted by UPSC and state PSCs. ➤ Students can transmit this knowledge as responsible citizens to other people of the nation who face difficulty in understanding the bureaucratic intricacies of the system.
Paper II- Economic System and Administration:	<p>Objective: The intent of this course is to make the students understand about different economic systems with their institutions and administrative system. Then they are introduced to the economies of various developing and developed nations.</p> <p>Outcome:</p> <ul style="list-style-type: none"> ➤ The student is able to comprehend the characteristics of the economic systems under capitalism, socialism and mixed economy. ➤ They come to understand the relationship between economic system and its relationship with the administrative system. ➤ The course broadens the vision of the students and they are able to understand the economic systems of specific developed and developing nations.
Paper III- Administrative Law:	<p>Objective: The course regarding administrative law highlights the importance of rule of law and separation of powers. It explains the administrative functions of various agencies and the mechanism of redressal of grievances.</p> <p>Outcome:</p> <ul style="list-style-type: none"> ➤ The study of administrative law helps students when they enter administrative services and are expected to work on delegated legislation or judicial agencies within administration. ➤ The students become aware of the methods and means available to persons whose rights have been infringed by officials.

	<ul style="list-style-type: none"> ➤ They would establish themselves as able administrators and help in realizing the idea of good governance.
Paper IV- Innovation in Modern Public Administration:	<p>Objective: The objective of this course is to introduce the students to the emerging concepts and tools of administration. They are taught about their rights for their empowerment. The students are introduced with Police administration.</p> <p>Outcome:</p> <ul style="list-style-type: none"> ➤ Students learn about civil society and people's participation in administration. ➤ They become capable of using their right to information, if needed, as they learn about Right to Information Act. ➤ Students come to know about the concept and application of good governance, e-governance, video conferencing, use of internet in public welfare etc.

M.A.I (Sociology) Program Specific Outcomes

To foster an interdisciplinary vision for the department of Sociological imagination and human interaction that respects diversity of culture individual identity and intellectual pluralism.

COURSE OUTCOMES

SEMESTER- I/II

Paper I Classical Sociological Tradition

Objectives

1. To acquaint students with the historical background of development of sociological thought.
2. To provide in depth knowledge about the pioneer sociologists and how they developed various concepts & theories about society.

Outcomes

- Comprehension of any discipline is incomplete without the knowledge of its founders, their life sketch and their thought process. This paper serves to provide above information.
- This paper also serves to develop critical thinking about the history of sociological thought

Paper II Research Methodology

Objectives

1. To acquaint students with scientific approach of study of society.
2. To provide students with the knowledge and practice of various tools & technology of data collection and analysis.
3. To create understanding about both quantitative and qualitative social research.

Outcomes

- Teaches students about the art of objective data collection.
- Students are introduced with the application of statistical techniques for scientific treatment of sociological information.
- Develops research aptitude among the students which is always useful in pursuing higher studies in sociology.

Paper III Rural Society in India

Objectives

1. To develop greater understanding of the rural society and its problems.
2. To define and explain rural society in India.

Outcomes

- Students can join Rural development organizations/ institutions as social worker and community mobilizers.
- Students develop in depth knowledge about rural society which helps them while working in various Government departments and NGOs dealing with rural development.

Paper IV Urban Society in India

Objectives

This paper attempts to acquaint students with concepts of urban sociology. It also aims to explore the issues concerning urban society in India.

Outcomes

- Provides Understanding about trends of urbanization in India and impact of urbanization on Indian society.
- Students develop awareness about urban problems, Policies and plannings.

SEMESTER- III

Paper I Sociology of Kinship, Marriage and Family	<p>Objectives</p> <ol style="list-style-type: none"> 1. Kinship, Marriage and Family are the foundation of any society. This paper introduces students with these basic concepts. 2. To provide students with basic information about the family systems, kinship and marriage patterns found in India and some tribal communities. <p>Outcome</p> <ul style="list-style-type: none"> ➤ The above knowledge is helpful in counselling work. ➤ It also helps students in managing personal relations within family & kin groups.
Paper II Indian Society and Culture	<p>Objective</p> <ol style="list-style-type: none"> 1. To provide knowledge of pluralism and diversity in Indian society. 2. To elucidate certain monographs by pioneer sociologists. <p>Outcome</p> <ul style="list-style-type: none"> ➤ Knowledge about Indian social tradition is crucial in understanding the outcome of change. This paper is very significant from this point of view
Paper III Sociology Essays	<p>Objectives</p> <ol style="list-style-type: none"> 1. To introduce students with the current and contemporary issues of human society. 2. To develop writing skills among the students. <p>Outcome</p> <ul style="list-style-type: none"> ➤ Students developed critical thinking skills. ➤ They learn to think and write about any social issue in a systematic manner. ➤ They learn to approach any social issue in an objective way.
Semester Paper IV Criminology	<p>Objectives</p> <ol style="list-style-type: none"> 1. To introduce students with the science and art of study of crimes and punishment. 2. To acquaint students with types & theories of crime and punishment, prison administration and reformation and rehabilitation of criminals. <p>Outcome</p> <ul style="list-style-type: none"> ➤ Study of this paper helps to know about crimes against various sections of the society such as children, women and the lower castes and classes. It also helps them in understanding the scenario which are helpful in prevention of crimes. ➤ Study of Human rights, reformatory institutes and personal management are part of this paper, which is job oriented
SEMESTER- IV	
Paper I Theoretical Respective in Sociology	<p>Objective</p> <ol style="list-style-type: none"> 1. To acquaint students with classical and modern sociological theories. 2. To teach them about applications of theories in understanding social events, interactions and patterns. <p>Outcome</p> <ul style="list-style-type: none"> ➤ Theories are always helpful in comprehension of various social phenomena. ➤ Research is not complete without theoretical orientation. Students can not pursue research of society without the knowledge of sociological theories.

Paper II Sociology of change and Development	<p>Correlation between theory and fact can not be established without the above knowledge. Hence this paper serves as backbone for persuing research in sociology</p> <p>Objectives</p> <ol style="list-style-type: none"> 1. To provide knowledge about social, economic and human development. 2. To impart knowledge about factors & theories of social change. <p>Outcome</p> <ul style="list-style-type: none"> ➤ Gives insight into the strategies of planned change. ➤ Highlights importance of sustainable development and the role of society in attaining sustainable development.
Paper III Political Sociology	<p>Objectives</p> <ol style="list-style-type: none"> 1. The main focus of the discipline is on the study of political processes of human society. 2. To gauge relationship between state and society and their mutual interaction. <p>Outcome</p> <ul style="list-style-type: none"> ➤ It introduces students with the political process of human society. ➤ It gives them knowledge about the institution of democracy.
Paper IV Industrial Sociology	<p>Objectives</p> <ol style="list-style-type: none"> 1. To provide knowledge about social relationship in Industries. 2. To give detailed information about social problems faced by people who are working in industries, such as the problems of labour, management and owners of industry. <p>Outcome</p> <ul style="list-style-type: none"> ➤ This is a job oriented programme. Students get jobs in industries, Government labour department and social welfare administration department. ➤ Many students are benefitted by knowledge of this paper while taking up research activities among labour class. ➤ Some students also go for further studies in labour law after seeking post graduation in industrial sociology

M.A. (Social Work) Program Specific Outcomes:

- Social work is a professional service based on scientific knowledge and skill in human relations, which assists individuals alone, or in groups to obtain social and personal satisfaction and independence.
- The main objective of this course is to developed skill among students to make them social work professionals.

COURSE OUTCOMES**SEMESTER- I/II****Paper I
Introduction to
Social Work
Profession****Objective:-**

- As a discipline social work focuses on theoretical and philosophical positions such as social justice, equality and empowerment.
- The objective of this course to provide thoughtful discussion to encourage students to investigate.

Outcome:-

- Above knowledge and philosophies will resides deeper in the consciousness of the students/ future social work professionals.
- Above investigation encourage students to define what a philosophy of social work means to them for their profession.

**Paper II Man
society Dynamics
of human
Behaviour****Objective:-**

- Its mission is to enable all people to develop their full potential, enrich their lives and prevent dysfunction.
- Its objective to develop skill and knowledge among students in the field of clinical social work.

Outcome:-

- Professional social worker/ students will focused on problem solving and positive change.
- Prepared students/ social worker can help clinically & by counseling to individuals families and communities.

**Paper III Methods
And Fields of
Social Work****Objective:-**

- This particular paper's main mission to develop a Varsity of skills technique and activities consisting with its holistic focus on persons, group community and their environment.
- Study & knowledge of Main fields of social work.

Outcome:-

- This particular content will help students to work successfully in the field of social work as a successful social work professionals.

**Paper IV Social
Work Research
and Statistics****Objective:-**

- The main objective of this paper draws on theories of Human Development, behavior and social system to analyze complex situations and to facilitate individual organizational and social and cultural change in a positive direction/manner.

Outcome:-

- The major outcome of research knowledge and statistics to help students

	<p>to glaring reality of social problems.</p> <ul style="list-style-type: none"> ➤ The positivistic argument asserts knowledge has to be observable and testable (quantitative) free from bias and ultimately replicable if it is to any merit. ➤ “Best practices” are taken from Research Findings.
SEMESTER- III	
Paper I Computer Application in Social Work	<p>Objective:-</p> <ul style="list-style-type: none"> • Computer Application knowledge will helpful in this third world to gather knowledge under one roof by saving time and efforts among students/ social work professionals. <p>Outcome:-</p> <ul style="list-style-type: none"> ➤ Skilled social worker/ professionals can do better job in the field of social work by data collection & saving their time with authentic & scientific information which will helpful for their career ahead.
Paper II Community Organization and Social Development	<p>Objective:-</p> <ul style="list-style-type: none"> • Social & community Development by trained social work professionals having good knowledge of community organization method & social work practices with moral values & skills. <p>Outcome:-</p> <ul style="list-style-type: none"> ➤ They will be able to serve in better way by adopting these methods & practical use of community organization method.
Paper III Urban community Development	<p>Objective:-</p> <ul style="list-style-type: none"> • Main focus of this curriculum to add knowledge of urban community & issues related with urban development eg. Problems of slums, drug addiction, alcoholism environmental pollution, violence, crime etc. • Objective of this course to develop skill among student to deal with urban issues. <p>Outcome:-</p> <ul style="list-style-type: none"> ➤ Social work professional can solve pathologies of society sympathetically by knowledge of urban community. It will be useful for their career by making principle for urban community development.
Paper IV Rural community and democratic decentralization	<p>Objective:-</p> <ul style="list-style-type: none"> • Main aims of this paper to add knowledge of rural community & society issues/ problems of rural community. • Successful implementation of project & programs of Government & non Government agencies. <p>Outcome:-</p> <ul style="list-style-type: none"> ➤ Students will be able spread awareness about the Government policies & programme. ➤ It will be going to be major tool for the student while working in the field of rural community social work.

M.Lib (Master) Program Specific Outcomes:

This programme would offer the students a thorough understanding and training about the librarianship in traditional libraries as well as in highly modern libraries. The main highlight of the programme would be to create efficient, progressive and meticulous library professionals who will meet the expectations of the employer in this fast changing environment of information and technology. Information communication, Information retrieval and repacking, Applications of information technology, Information analysis, research methods and statistical techniques. Career opportunities are in various public (village, town, state central library etc.) libraries, academic (schools, colleges and universities) libraries, also in special and research libraries. Even, corporate houses also establish libraries to keep their employees up to date with latest happenings. Museum and galleries also appoint library professionals to manage manuscripts and other stuffs.

M.Lib.& I.Sc. (Master of Library & Information Science)**COURSE OUTCOMES****Paper I Universe of Knowledge and Research Methodology**

The objective of this course will make student understand the universe of Knowledge and Basics of Research.

- Students completing this course will be able to explore universe of subjects, modes of thinking and research methods and techniques.
- Students will be able to analyse the methods of Research techniques and research process.
- Students can design a good research report after completing the course.

Paper II: Management of Academic Library System

The objective of the course is aware students about the role of Academic Library and Human resource management.

- Students during the course will understand needs of financial management and procedure of development of Academic library.
- Students completing this course will come across the procedure of Library House Keeping operations and requirement of resource sharing.

Paper III: Information Processing and Retrieval System

The objective of the course is to aware students about Information storage and retrieval system.

- Students during the course will understand needs of Information Storage and Retrieval (ISR) systems.
- Students completing this course will be able to access Information Retrieval System and know how to manage information system.

Paper IV: Knowledge Organization and Processing (Classification & Cataloguing Practical)

The objective of the course is to enable classification of documents/micro documents using UDC.

- Students during the course will understand fundamental of Cataloging.
- Students completing this course will be able to design catalogs of special material by AACR-2.

Paper V: Information, Communication and Society	<p>The objective of the course is to aware students to establish link between Information, Communication and Society.</p> <ul style="list-style-type: none"> ➤ Students during the course will understand needs of Information Science and Knowledge Management. ➤ Students completing this course students will understand the relation between Information, Library and society.
Paper VI: Information Sources, Systems and Content Creation	<p>The major course objective is to aware students about Information medium and encoding standards. Students will be able to evaluate the process of content creation and storage.</p> <ul style="list-style-type: none"> ➤ Students will be able to differentiate between various storage devices like CD, DVD, and web based documents. ➤ Students will be able to differentiate between various file formats and requirements of encoding standards and their methods.
Paper VII: Information Technology: Application (Theory)	<p>The course objective is to give basic knowledge of computer structure and Information Technology to the students.</p> <ul style="list-style-type: none"> ➤ Students will understand the basic structure of computer, Network Technologies, Automated Systems and INTERNET. ➤ Students will be able to understand the process of establishing Digital libraries and Institutional Repositories.
Paper VIII: Information Technology: Application (Practical)	<p>The course objective is to give hands-on training to students on computer, establishment and social networking.</p> <ul style="list-style-type: none"> ➤ Students will observe the basic requirements of computer, establishing network technologies, automated systems and use of INTERNET. ➤ Students will be demonstrated by process of establishing Digital libraries and Institutional repositories.
Paper IX: Tour Report	<p>The main objective of a study tour is to get familiar with the practical systems, organizations, notions, customs, culture, places and people.</p> <ul style="list-style-type: none"> ➤ Students will be able to realize the fact that life is a challenge and that all have to strive hard to win the battlefield. They will accrue field knowledge and challenges. ➤ Tour to a library helped intentional learning at both conscious and unconscious levels of observation. However, the outcome reveals a powerful impact on participants both academic and personal fronts which they never had.

Faculty of Commerce

M.Com. (Master of Commerce)

Program Outcomes

The faculty of Commerce offers PG classes with marketing management.

- Commerce is a vibrant, Dynamic & futuristic subject with Sea of options and plethora of opportunities.
- Commerce students can work as Banker, chartered Accountant, Company Secretary, marketing & sales manager, Advertising professional, expert in Actuarial science, Insurance & as an auditor etc.
- They have practical knowledge of generating self & corporate employment identify problems & intricacies of business.
- Students create possibilities for entrepreneurship, Innovations & development and be a part of various programmes of Govt. Of India like startup India, Skill India and Make in India are strongly aligned with business & commerce.
- Through e-business & e-commerce students are closely related to digital India which is need of time.

COURSE OUTCOMES

SEMESTER -I

Paper Management concepts	I	After completing this course students will be able to- <ul style="list-style-type: none">• Define properly management principles like planning/ organizing/ budgeting/ coordination/ control etc.• Emerge as a team player.• Identify the challenges in business.• Develop the capabilities to sustain pressure & to handle or deal with people under stressful situations.• Create better job opportunities aids in career progression & development.• Knowledge of sound communication skills.• Evaluate the probable solutions.• Fosters employability qualities to become an asset for the organization also trained professional to face competition in public & private sector.
Paper II Business environment		After completing this course students will be able to- <ul style="list-style-type: none">• Explain various internal & external, national and international environmental factors affecting business.• Assess business opportunities globally.• Formulating business strategies to meet global competition.• Discuss & explain the concepts of Liberalization, Globalization & Privatization.• Identify uncertainties/ risks/ problems & crisis in business.• Apply the knowledge of factor affecting business political/social/culture/to promote business.• Comparison of various laws (legal environment).

		<ul style="list-style-type: none"> • Develop as better corporate citizen by applying corporate social responsibility programmes.
Paper III Advanced Accounting		<p>After completing this course students will be able to-</p> <ul style="list-style-type: none"> • Explain problems pertaining to final accounts. • Compute Accounting from Incomplete records. • Evaluate insurance claim. • Compare various Accounts like investment A/C insolvency & voyage A/C. • Analyze how dissolution of partnership from is conducted. • Identify the problems associated with accounting from incomplete records & problems with Bank reconciliation. • Prepare Account for non profit organization. • Describe methods for the rectification of errors.
Paper IV analysis control	Cost and	<p>After completing this course students will be able to-</p> <ul style="list-style-type: none"> • Explain various concepts of costs and analyze various costing methods. • Compare costing for sound business decision making. • Discuss methods & teachings of costing. • Assess methods of controlling Inventory. • Determine operating cost and compute marginal cost • Analyze breakeven point. • Prepare functional budget. • Conduct cost audit. • To identify methods of controlling budget.
SEMESTER -II		
Paper I Corporate framework	legal	<p>After completing this course students will be able to-</p> <ul style="list-style-type: none"> • Discuss the relevance & various provisions of the companies Act. 1956. • Applying knowledge of memorandum of (Association understanding) (MoU) & article of association in running company. • Management of company with legal compliance. • Determining legal ways to wind up & dissolve the company or business. • Explain the negotiable instrument Act (1881) and knowledge of monopolies & restrictive trade practices; ways to avoid unfair trade practices; (MRTP Act 1962). • Outline the rights of consumers (consumer protection Act 1986) and process of grievance redressal & forums available. • Compare & evaluate the regulatory environment for international business. • Role of agencies like W.T.O. • Settlement of disputes & removing the barriers.
Paper II Organizational Behavior		<p>After completing this course students will be able to-</p> <ul style="list-style-type: none"> • Define & explain behavioural concepts like personality & perception. • Prepare themselves to manage change and utilize managerial skills. • Discuss the need for sound organizational culture. • Outline interpersonal effectiveness like persuasion/ coaching/ counseling/ mentoring negotiation and handling stress & creative use of emotions.

		<ul style="list-style-type: none"> • Apply the knowledge for conflict resolution. • Demonstrating skills like & for Self Development and Personality Development • Critically evaluate ethical perspective & human values. • Building cordial organizational relations. • Create motivating climate (Boosting morale). • Deriving Job satisfaction by Human Resource Management.
Paper III Advanced Statistical analysis		<p>After completing this course students will be able to-</p> <ul style="list-style-type: none"> • Explain theories of probability & probability distributions and sampling. • Data collection & interpretation in order to uncover patterns & trends. • Designing surveys & conducting studies. • Applying knowledge of statistics for Business Decisions & Management and minimizing the risk & uncertainties with the tool of statistical analysis. • Collection/ organizing/ analysis/ evaluation & presentation of data for correct Interpretation in making Managerial decisions.
Paper IV Functional Management		<p>After completing this course students will be able to-</p> <ul style="list-style-type: none"> • Preparation of a sound Financial plan. • Explain capitalization & capital structure concepts. • Determining the functions of financial managers including training & manpower planning. • Applying knowledge of marketing management for expansion of business & exploring newer avenues. • Designing advertising & sales promotion strategies. • Using methods & techniques of sales promotion to face competitor. • Analyze the significance of personnel & Human Resource Management.
SEMESTER -III		
Paper I Managerial Economics		<p>After completing this course students will be able to-</p> <ul style="list-style-type: none"> • Explain the concept of managerial economics. It's a practical aspect of eco. • Determining the role & responsibilities of managerial economist. • Applying theories like profit maximization in business and the theories of consumer choice & revealed preference theory • Analysis of demand and elasticity of demand. • Outline business cycle various phases of business & how theories can be applied to give effective results. • Knowledge regarding uncertainties & risk. • Measurement of profit. • Applying knowledge of economics for balanced socio economic development.
Paper II Tax planning & Tax management		<p>After completing this course students will be able to-</p> <ul style="list-style-type: none"> • To recognize tax planning opportunities. • Designing tax saving strategies. • Explain how to comply with the provisions of Income tax laws and its allied rules.

		<ul style="list-style-type: none"> • Identify the role of tax planning in setting up of a new business. • Applying knowledge of taxation for smooth functioning of business and assessment of Tax. • Management of Tax to avoid penalties & prosecution. • Analyze various tax deductions available. • Recognize the significance of tax planning during mergers & amalgamations. • Applying practical judicial pronouncements with the major & latest provisions of Indian tax laws. • Determine the appellate tribunals for grievances related to taxes.
Paper III Entrepreneurship Skill Development		<p>After completing this course students will be able to-</p> <ul style="list-style-type: none"> • Explain the concept of entrepreneurship apply the knowledge of theories of entrepreneurship to practical problems. • Discuss the emergence of entrepreneurial class. • Identify opportunities to start new venture. • Design marketing & promotional strategies to promote the ventures. • Evaluate various internal & external environment factors affecting business. • Realizing the importance of social responsibilities (corporate social responsibility). • Evaluate various schemes of Government/ initiatives/ programmes for our own benefit skill India/ start up India/ Make in India etc. • Knowledge of Entrepreneurship Development programmes.
Paper IV Accounting Managerial Decisions	for	<p>After completing this course students will be able to-</p> <ul style="list-style-type: none"> • Explain how accounting can be used in long & short term decisions involving the financial health & stability of the business. • Identify the opportunities for Investment. • Prepare students to make operational decisions intended to help to increase the company's financial efficiency. • Applying knowledge of accounting to solve practical problems in business. • Evaluating various alternative solutions and analyzing ways to maximize profit & minimize losses. • Comparing various investment proposals with help of Fund Flow & Cash Flow. • Preparing various reports. • Controlling the business with the tool of Budgeting (Financial control).
SEMESTER -IV		
Paper I Advertising & sales management		<p>After completing this course students will be able to-</p> <ul style="list-style-type: none"> • Explain Advertising process. • Apply the knowledge of Legal & ethical aspect of advertising and the role of regulatory agencies monitoring advertising. • Utilizing Advertising techniques for business development & social change. • Comprising various components of marketing mix like personal selling/ publicity/ sales promotion.

		<ul style="list-style-type: none"> • Determining target audience towards whom the advertising is directed. • Preparing Advertising Copy/ Layout/ message and creatively Designing Advertising Appeal. • Planning Advertising media/ media choice. • Running and advertising agency. • Effectively manage sales force (Team/ Territory). • Conduct door to door selling.
Paper Consumer Behaviour	II	<p>After completing this course the students will be able to</p> <ul style="list-style-type: none"> • Explain various factors affecting consumer behavior (economical/ social/ anthropological/ psychological/ personal need). • To identify consumer needs & wants and to analyze Buying motives. • Explain consumer buying pattern. • Prepare market segmentation & classification and design strategies to attain consumer satisfaction. • Outline ways for New Product development and to evaluate the feedback from consumers. • Apply consumer behavior concepts in reviewing psychological, motivational & behavioral reasons for making purchase.
Paper III Rural and Agricultural marketing		<p>At the end of this course students will be able to-</p> <ul style="list-style-type: none"> • Discuss the Dimensions & Components of rural market. • To identify the need for improved rural infrastructure. • To apply marketing theory and directing marketing efforts to create & satisfy the needs & wants of rural markets. • Compare & classify rural market viz. village market/ primary/ secondary/ terminal market. • Identify the ways for optimum utilization of rural untapped resources. • Explain the marketing channels & distribution network in rural areas. • Apply agricultural marketing concepts to generate employment & Improved living standard. • Design strategies for Development of agro-based industries & solve problems. • Contribute for overall balanced economic & social development of rural areas.
Paper International Marketing	IV	<p>At the end of this course students will be able to-</p> <ul style="list-style-type: none"> • Explain the concept of international marketing. • Explain the concepts of direct & indirect trading/ mode of payment. • Identification & selection of foreign market. • Strategies for International market & export promotion. • Devising pricing strategies to meet the competition (Price quotations). • SWOT analysis to survive internationally. • Assess various export credits available. • Procedure for export & import & preparation of Documents. • Comparison between bilateral & multilateral agreement. • Knowledge about International trade & Monetary Organizations

Faculty of Home Science

M.Sc. (Home Science) Human Development

Program Specific Outcomes:

The Department of Home Science offers Masters program in Human Development. The program is devoted to understanding the nature of human development across the lifespan in a culturally diverse, changing and complex world. Our endeavour is to apply contextual and systemic frameworks to the study of development and relationship processes through research, teaching and application. The curriculum values and supports interdisciplinary perspectives and combines classroom learning with field opportunities. There is a special emphasis on the study of heterogeneity among children and adults in varied settings.

M.Sc. degree program translates to making a significant investment in one's professional career.

- To the enhanced career prospects that can be gained by taking a Master of Science.
- Valuable personal skills and fulfil a crucial prerequisite to PhD study.
- Candidates normally have to do independent research and present a thesis as requirement for graduation.
- An understanding of professional, ethical, legal, security and social issues and responsibilities.

COURSE OUTCOMES:

SEMESTER -I

Paper I History and Theories of Human Development

Course Objectives:

- To learn about the history of study of human development;
- To understand the need for theory in Human Development
- To understand theories in context
- To discuss various theories of Human Development
- To comprehend the cultural notions of children and childhood; to study evolving contemporary theories in the discipline; and
- To provide a framework to locate human development and childhood in an interdisciplinary context.

Students will be able to

- Understand the historical and philosophical traditions and theories of development
- Comprehend the task of knowledge construction with reference to human development and childhood studies
- Appreciate and analyse the different theories of development
- Examine historical perspectives in the evolution theory
- Develop skills for critical appraisal and construction of theories of development
- Critically evaluate the cross-cultural applicability of theory

PAPER-II - Methods of Studying Human Development

course objectives:

- To study the domains of human development from the life span perspective.
- To study different methods and techniques of understanding Human Development

The students will be able to

- Demonstrate an understanding of the biological, psychological, social and cultural influences of lifespan human development;

	➤ To apply the various methods studied in a practical context
PAPER-III - Early Childhood Care and Education	<p>Course Objectives:</p> <ul style="list-style-type: none"> • To engage with contemporary positioning of Early Childhood Care and Education • To provide theoretically guided curricular framework for effective implementation of early childhood development programs. <p>The students will be able to</p> <ul style="list-style-type: none"> ➤ Explain the contemporary emergence and positioning of Early Childhood Care and Education along a theoretically guided curricular framework ➤ Plan ECCE programs keeping in mind socio-cultural diversity and knowledge of local and global methods and practices ➤ Design strategies for effective capacity building and implementation of early childhood development programmes
PAPER -IV Research Methods and Statistics	<p>Course Objectives:</p> <ul style="list-style-type: none"> • To provide students understandings about the basic concepts, approaches and methods in conducting research thereby enabling them to appreciate and critique the nuances of designing a research study as well the ethical dimensions of conducting researches. <p>Students will be able to:</p> <ul style="list-style-type: none"> ➤ Demonstrate knowledge of the scientific method, purpose and approaches to research ➤ Compare and contrast quantitative and qualitative research ➤ Explain research design and the research cycle ➤ Prepare key elements of a research proposal ➤ Explain ethical principles, issues and procedures
PRACTICAL – I - Methods of Studying Human Development	<p>Course Objectives:</p> <ul style="list-style-type: none"> • Demonstrate an understanding of the biological, psychological, social and cultural influences of lifespan human development; • To understanding the nature of human development across the lifespan in a culturally diverse, changing and complex world ➤ To apply the various methods studied in a practical context ➤ Assess and evaluate developmental milestones of Human Development
PRACTICAL - II Early Childhood Care and Education	<p>Course Objectives:</p> <ul style="list-style-type: none"> • To understand pedagogy and principles of curriculum framework along with understanding of community orientation and socio-cultural diversity for optimal development of young children in ECCE programs. <p>Students would be able to</p> <ul style="list-style-type: none"> ➤ Develop skills to use principles of pedagogy and curricular framework for optimal development through ECCE programs ➤ Develop ways to address socio-cultural diversity through local and global methods and practices ➤ Devise and develop strategies for effective capacity building, implementation and assessment of early childhood care and education programs ➤ Acquire necessary skills to work effectively with families and form collaborative relationships with them

SEMESTER-II

PAPER- I- Advanced Study In Human Development-I	Course Objective: <ul style="list-style-type: none">• To understand an advanced study of the stages in Human Development with special focus on stages from prenatal development to adolescence• To understand the principles and factors influencing Human Development in these stages <ul style="list-style-type: none">➤ Demonstrate knowledge of developmental processes and principles during prenatal development to adolescence➤ To engage with the critical areas in the study of development in stages during prenatal development to adolescence➤ To demonstrate knowledge of domains of development during prenatal development to adolescence
PAPER-II- Infant Development & Parenting	Course Objective: <ul style="list-style-type: none">• To get an overview of infancy and infant development as a first stage in the life span development• To provide knowledge in parenting for care of high risk child from birth to 3year• To enhance development and prevent delays <ul style="list-style-type: none">➤ To recognize typical and atypical development during ages birth- 3 years➤ To gain understanding of the critical empirical and applied work in the field of infancy➤ To theoretically understand the development of norms and recognize delays.➤ Increase ability to support the family and strengthen the parent's ability to support his/her child's development.➤ Increase ability to develop intervention strategies based on a child's individual needs.
PAPER-III- Adolescence and Youth	Course Objectives: <ul style="list-style-type: none">• To enhance knowledge of the developmental processes and principles during adolescence and youth and• To foster engagement with the critical areas and domains of development during this period <p>The student will be able to:-</p> <ul style="list-style-type: none">➤ Demonstrate knowledge of developmental processes and principles during adolescence and youth➤ To engage with the critical areas in the study of development in adolescence and youth➤ To demonstrate knowledge of domains of development during adolescence and youth
PAPER-IV Statistics and Computer Application	Course Objectives: <ul style="list-style-type: none">• To understand the basic concepts, theories and methods in statistics;• To learn basic statistical procedures for research,• To understand applications of statistical techniques for analysis and interpretation.

	<ul style="list-style-type: none"> ➤ Differentiate between the qualitative and quantitative methods of analysis of data ➤ Suitably apply data reduction strategies and illustrate data using various graphical methods ➤ Use appropriate parametric and non parametric statistical tests ➤ Draw conclusions and interpretations from the analysis of data using various statistical software
PRACTICAL – I- Infant Development & Parenting	<p>Course Objective:</p> <ul style="list-style-type: none"> • To provide skills in assessing, planning, implementing and documenting early intervention for infants and toddlers at risk and with developmental delays and knowledge for communicating the same to parents within communities. <ul style="list-style-type: none"> ➤ To assess, plan and implement early intervention for infants and toddlers at risk & with developmental delays. ➤ To impart techniques of working with families and community for effective intervention. ➤ To develop competency in report writing, record maintenance and communication. To facilitate and integrate the children into community programmes and family guided intervention
PRACTICAL – II Adolescence and Youth	<p>Course Objective:</p> <ul style="list-style-type: none"> • To develop skills of studying Adolescence and Youth across domains and contexts, • To undertake an appraisal of tools and techniques of studying Adolescents and Youth, • To learn skills of engaging with Adolescents and Youth for a deeper understanding of Human Development <p>The student will be able to</p> <ul style="list-style-type: none"> ➤ Undertake studies of Adolescence and Youth across domains ➤ Identify and use appropriate tools and techniques of studying Adolescence and Youth ➤ Engage and work with Adolescence and Youth across contexts
PRACTICAL – III- Statistics and Computer Application	<p>Course Objectives:</p> <ul style="list-style-type: none"> • To understand the basic concepts, theories and methods in statistics, learn basic statistical procedures for research and understand applications of statistical techniques for analysis and interpretation <p>The students will be able to</p> <ul style="list-style-type: none"> ➤ Identify various types of data measurement tools/tests/procedures and understand the concept of standardisation and reliability and validity. ➤ Apply various data reduction and coding methods on quantitative and qualitative data. ➤ Organise the data and effectively use appropriate quantitative and qualitative statistical software for analysis of data ➤ Draw conclusions and interpretations from the analysed data and write reports.

SEMESTER-III

PAPER- I – Advanced Study in Human Development-II	<p>Course Objective:</p> <ul style="list-style-type: none">• To study theoretical constructs of adulthood and aging across the disciplines of life span developmental psychology, sociology, anthropology, history and other social sciences.• To understand an advanced study of the stages in Human Development with special focus on stages from Youth/Young Adulthood to Middle Age• To understand the principles and factors influencing Human Development in these stages• To understand Physical and psychological changes in women and in men. And Behavioural changes in them . <p>➤ Demonstrate knowledge of developmental processes and principles during Young Adulthood to Middle Age</p> <p>➤ To engage with the critical areas in the study of development in stages during Young Adulthood to Middle Age</p> <p>➤ To demonstrate knowledge of domains of development during Young Adulthood to Middle Age</p>
PAPER- II – Persons With Special Needs – I	<p>Course Objectives:</p> <ul style="list-style-type: none">• To develop in students the significance of children’s social and ecological contexts within which developmental disabilities occur.• To become aware of various impairments and the manner in which these affect the lives of individuals• To provide knowledge of definitions, etiology, diagnosis, identification and assessment of childhood disabilities and to create an understanding of the approaches and practices for inclusion and empowerment of children and families <p>➤ The student will understand conceptual approaches to developmental disabilities.</p> <p>➤ The student will acquire knowledge of definitions, etiology, diagnosis, and assessment of childhood disabilities</p>
PAPER- III – Principles Of Guidance and Counselling	<p>Course Objective:</p> <ul style="list-style-type: none">• The critical evaluation of diverse counselling concepts, theories and techniques will be promoted through debate, discourse and written assignments.• To understand the need of guidance and counselling in Human Development• To discuss the processes involved in counselling and therapy <p>The student will be able to</p> <p>➤ Appreciate the purpose, scope, theories, and practises of counselling for child development.</p> <p>➤ Understand development needs from the lifespan perspective; identify at risk children and assess various concerns that families bring into the counselling process.</p>

PAPER- IV – Mental Health and Psychopathology- I	<p>➤ To learn the processes involved on counselling at different stages in life</p> <p>Course Objective:</p> <ul style="list-style-type: none"> • To Understand the importance of mental health at different stages in life • To develop skills for promoting mental health across the life span • To identify mental health issues in the community and sensitizing its members • To develop skills of organizing school mental health program <p>➤ Students will Understand the importance of mental health at different stages in life</p> <p>➤ Students will develop skills for promoting mental health across the life span</p> <p>➤ Students will learn to identify mental health issues in the community and sensitizing its members</p> <p>➤ Students will develop skills of organizing school mental health program</p>
PRACTICAL - I – Persons With Special Needs – I	<p>Course Objectives:</p> <ul style="list-style-type: none"> • To develop in students the significance of children's social and ecological contexts within which developmental disabilities occur. • To become aware of various impairments and the manner in which these affect the lives of individuals <p>➤ To apply the various methods studied to identify the disability in a practical context</p> <p>➤ The student will develop a holistic understanding of the educational ecosystem, processes and practices with reference to disability</p> <p>➤ The students are oriented to the linkages between social policy, legislations and implementation of schemes and programmes for persons with special needs</p> <p>➤ Demonstrate knowledge of assessment and assistive devices used in various disabilities</p>
PRACTICAL - II – Principles of Guidance and Counseling	<p>Course Objectives:</p> <p>To develop and practice the basic counselling skills of observation, attending, active listening, empathy, appropriate questioning, paraphrasing, reflection of feeling and thought, summarization, confrontation and constructive use of silence.</p> <p>The student will be able to</p> <p>➤ Develop skills to identify the problems/difficulties through the counselling process.</p> <p>➤ Develop skills in using select approaches and techniques of counselling</p>
SEMESTER-IV	
PAPER- I – Advanced Study in Human Development-III	<p>To study theoretical constructs of adulthood and aging across the disciplines of life span developmental psychology, sociology, anthropology, history and other social sciences.</p> <p>The student will be able to</p> <p>➤ Demonstrate knowledge of developmental processes and principles during adulthood</p>

	<ul style="list-style-type: none"> ➤ To engage with the critical areas in the study of development in adulthood ➤ To demonstrate knowledge of domains of development during adulthood
PAPER- II – Persons With Special Needs – II	<p>Course Objectives:</p> <ul style="list-style-type: none"> • To develop in students the significance of children’s social and ecological contexts within which developmental disabilities occur. • To provide knowledge of definitions, etiology, diagnosis, identification and assessment of childhood disabilities and to create an understanding of the approaches and practices for inclusion and empowerment of children and families • To identify the physical and social barriers creating difficulties for people with disabilities <ul style="list-style-type: none"> ➤ The student will understand conceptual approaches to developmental disabilities. ➤ The student will acquire knowledge of definitions, etiology, diagnosis, and assessment of childhood disabilities
PAPER- III – Principles of Guidance and Counselling- II	<p>course objective:</p> <ul style="list-style-type: none"> • The critical evaluation of diverse counselling concepts, theories and techniques will be promoted through debate, discourse and written assignments. • To understand the need of guidance and counselling in Human Development • To discuss the processes involved in counselling and therapy <p>The student will be able to</p> <ul style="list-style-type: none"> ➤ Appreciate the purpose, scope, theories, and practises of counselling for child development. ➤ Understand development needs from the lifespan perspective; identify at risk children and assess various concerns that families bring into the counseling process. ➤ To learn the processes involved on counseling at different stages in life
PAPER- IV – Mental Health and Psychopathology – II	<p>course objective:</p> <ul style="list-style-type: none"> • To understand the importance of mental health at different stages in life • To develop skills for promoting mental health across the life span • To identify mental health issues in the community and sensitizing its members • To develop skills of organizing school mental health program <ul style="list-style-type: none"> ➤ Students will Understand the importance of mental health at different stages in life ➤ Students will develop skills for promoting mental health across the life span ➤ Students will learn to identify mental health issues in the community and sensitizing its members ➤ Students will develop skills of organizing school mental health program
PRACTICAL - I – Persons With Special Needs – II	<p>Course Objectives:</p> <p>To provide knowledge of definitions, etiology, diagnosis, and assessment of childhood disabilities and to create an understanding of the approaches and practices for inclusion and empowerment of children and families</p>

	<p>Course Learning Outcomes: The student will be able to:</p> <ul style="list-style-type: none"> ➤ Develop the skills of screening children and adolescents for and with disability ➤ Gain an understanding of methods of working with children and adolescents with disability 3. Learn the skills of providing guidance and counselling to children and their families
PRACTICAL - II – Principles of Guidance and Counseling – II	<p>Course Objectives:</p> <ul style="list-style-type: none"> • To develop and practice the basic counselling skills of observation, attending, active listening, empathy, appropriate questioning, paraphrasing, reflection of feeling and thought, summarization, confrontation and constructive use of silence. <p>The student will be able to</p> <ul style="list-style-type: none"> ➤ Develop skills to identify the problems/difficulties through the counselling process. ➤ Develop skills in using select approaches and techniques of counselling

M.Sc. (Home Science) Food & Nutrition Program Specific Outcomes:

- Students will be able to provide nutrition counseling and education to individuals, groups, and communities .
- Able to apply knowledge of health behavior, clinical skills, while assessing the nutritional status of individuals
- Apply food science knowledge to describe functions of ingredients in food.
- Students will be able to demonstrate a variety of communication strategies in nutrition and food education emphasizing information technology
- Able to determine nutrient needs into menus for individuals / groups , in diverse cultures and religions, and for different income levels
- Able to determine medical nutrition therapy for a variety of advanced medical conditions.
- Able to analyze foodservice operations using the foodservice systems approach
- Able to Interview individuals for diet histories ,counsel individuals and calculate and interpret nutrient composition of foods.
- Students will be able to understand the relevance, specifications and importance of quality control in food industries
- Student are eligible for jobs in Hospitals, Gym, Nursing Homes , NGO's with the knowlegde of food and nutrition.
- Students with their leadership quality can become a successful entrepreneur and become nutrition innovators
- Students will be prepared to undertake further study at doctoral level in the field of food and nutrition.
- Student are eligible for Certified Nutrition Specialist with th following given post
 - a) Clinical Dietician
 - b) Dietetic Technicians
 - c) Health Coach
 - d) Health Educators and Community Health Workers
 - e) Holistic Nutritionist
 - f) Licensed Nutritionists
 - g) Nutrition Specialties
 - h) Registered Dieticians
 - i) Registered Nurses
 - j) Rehabilitation Counsellors
 - k) Sports Nutritionist

COURSE OUTCOMES

SEMESTER- I

PAPER I--Applied Physiology

Objective of this course is to identify and learn about the structure of human organs and their functions .After successful completion of this course, the students should be able to

- Understand the physiological processes and functions as applicable to human nutrition
- Learn the anatomical structures and physiology of human body.
- Identify and use proper terminology for describing the anatomy of the body.
- Observe and examine the functions of various components of a body system

	under normal conditions.
PAPER II-- Advanced Nutritional Biochemistry	<p>Objective of this course is to make student learn about the chemistry of body and the metabolic role of nutrients in the body. After successful completion of this course, the students should be able to</p> <ul style="list-style-type: none"> ➤ Understand the biological processes and systems as applicable to human nutrition. ➤ Students will understand the principles of biochemistry and also chemistry of major nutrients. ➤ Understand the metabolism of foods. ➤ Recognize the various metabolic disorders. ➤ Comprehend the Biochemical implications of foods and diseases.
PAPER III—Public Nutrition	<p>Objective of this course is to make students aware about the importance of nutrition at community level. After successful completion of this course, the students should be able to</p> <ul style="list-style-type: none"> ➤ Understand the role of nutrition at community level to educate the community. ➤ Develop skills to conduct simple nutrition assessments to determine risk for under nutrition and over nutrition. ➤ Generate wellness and healthy lifestyle adoption in community. ➤ Assess nutritional requirement of adults, nutritional needs during pregnancy and lactation
PAPER IV-- Research Methods and Statistics	<p>Objective of this course is to provide students understandings about the basic concepts, approaches and methods in conducting research thereby enabling them in designing a research study. After successful completion of this course, the students should be able to</p> <ul style="list-style-type: none"> ➤ Demonstrate knowledge of the scientific method, purpose and approaches to research. ➤ Compare quantitative and qualitative research. ➤ Prepare and explain research design. ➤ Prepare and present research proposals
SEMESTER II	
PAPER I-- Advance in Food Microbiology	<p>Objective of this course is to impart the knowledge about the microorganisms. And to understand the important pathogens and spoilage microorganisms in foods.</p> <p>After successful completion of this course, the students should be able to</p> <ul style="list-style-type: none"> ➤ Identify the role of beneficial microorganisms in foods and their use in fermentation processes. ➤ Students able to use appropriate laboratory techniques to enumerate, isolate, and identify microorganisms in foods. ➤ Understand the interaction between microorganisms and food. ➤ Explain the significance of microorganisms in food. ➤ Describe the characteristics of food borne and water borne microorganisms.
PAPER II--Applied Biochemistry And Technique	<p>Objective of this course aims to create awareness about scientific instrument used in applied biochemistry. And to learn the principles of biochemical research.</p>

	<p>After successful completion of this course, the students should be able to</p> <ul style="list-style-type: none"> ➤ Conduct fractional separation of food-protein ,amino acid, fatty acids ➤ Use chromatographic techniques in different laboratory ➤ Prepare pH-buffer solutions for experiment ➤ Know the Centrifugal techniques and principles of sedimentation, ➤ Use Spectroscopic techniques
PAPER III-- Nutrition and Health Problems	<p>Objective of this course is ,gain awareness about the health related problems treated with good nutrition , After successful completion of this course, the students should be able to</p> <ul style="list-style-type: none"> ➤ Role of nutrition at various stages .of life. ➤ Nutrition and its implications under .different diseased conditions. ➤ Nutrition as an integral part in the .development of a community. ➤ Nutrition and lifestyle changes towards a better future society
PAPER IV-- Statistics and Computer Application	<p>Objective of this course is to learn basic statistical procedures for research and understand applications of statistical techniques for analysis and interpretation. After successful completion of this course, the students should be able to</p> <ul style="list-style-type: none"> ➤ Compare between the qualitative and quantitative methods of analysis of data. ➤ Apply data reduction strategies and illustrate data using various graphical methods. ➤ Use appropriate parametric and non parametric statistical tests. ➤ Draw conclusions and interpretations from the analysis of data using various statistical soft wares.
SEMESTER III	
PAPER I--Advance Nutrition	<p>Objective of this course aims to understand the detail of nutrition and the psychology of food. After successful completion of this course, the students should be able to</p> <ul style="list-style-type: none"> ➤ Identify what foods are good sources for what nutrients. ➤ Students will be familiar with factors affecting for the absorption of nutrients. ➤ Explain the interrelationship of diet and drug
PAPER II-- Dietetics and Therapeutic Nutrition	<p>Objective of this course is to provide a deep insight of principles diet therapy and calculations of nutrients in food. After successful completion of this course, the students should be able to</p> <ul style="list-style-type: none"> ➤ Gain knowledge about food pyramid, vegetarian diet, and the role of dietitian. ➤ Prepare menu plan according to nutritional needs during infancy to adolescents. ➤ Modify normal diet for therapeutic purposes and counsel patients effectively. ➤ Demonstrate counseling techniques to facilitate behavior change. ➤ Plan a diet chart under normal conditions and prescribe individualized diets. ➤ Understand diet under hospital conditions with In-depth knowledge on hospital diets.
PAPER III Food	<p>Objective of this course is to elaborate the role of food science in food industry.</p>

Science	<p>After successful completion of this course, the students should be able to</p> <ul style="list-style-type: none"> ➤ Gain knowledge regarding processing, preservation and storage of foods. ➤ Understand the medicinal value of Indian spices and condiments. ➤ Understand the basic concepts behind food science and food preparation. ➤ Gain an in-depth understanding on cooking food scientifically.
PAPER IV-- Issues Related to Women's Health	<p>Objective of this course is to familiarize students with current issue of women's health. After successful completion of this course, the students should be able to</p> <ul style="list-style-type: none"> ➤ Prevent adult women from common health problem that occur any time ➤ Analyze health concerns of women , such as breast cancer, cervical cancer, menopause, and pregnancy. ➤ Prevent women suffering from higher heart attack deaths ➤ Counsel female patients with depression and anxiety
SEMESTER IV	
Paper I Health and Fitness	<p>Objective of this course is to provide understanding of the concept of health in means of holistic fitness. After successful completion of this course, the students should be able to</p> <ul style="list-style-type: none"> ➤ Emphasize the correlation between nutrition and staying fit. ➤ Improve the nutritional status for specific sports conditions. ➤ Know the role of exercise and physical activity
PAPER II--Clinical and Therapeutic Nutrition	<p>Objective of this course is to familiarize with the causes, symptoms, risk factors and dietary management of different disease conditions. After successful completion of this course, the students should be able to</p> <ul style="list-style-type: none"> ➤ Gain knowledge about etiology, risk factors of clinical diseases ➤ Manage diet for DM, cancer, , CVD gall bladder & pancreas, kidney and liver diseases. ➤ Understand the implication of diet under diseased conditions. ➤ Understand the correlation between diet
PAPER III-- Food Science and Current Trends	<p>Objective of this course aims to facilitate understanding of the concepts of food science in present scenario. After successful completion of this course, the students should be able to</p> <ul style="list-style-type: none"> ➤ Apply knowledge gained in food chemistry, processing, and preservation of safe, nutritious, and high-quality food products. ➤ Utilize advanced technologies to process and analyze food products and to solve food safety problems. ➤ Design food products that meet the various food regulations and laws. ➤ Assess and analyze food science information in an innovative way.
PAPER IV-- Nutrition And Health Of Women, Child And Elderly	<p>Objective of this course is to familiarize students with good sources of food and nutrients to improve the health of women. After successful completion of this course, the students should be able to</p> <ul style="list-style-type: none"> ➤ Understand the importance of nutrition in various stages of life. ➤ Evaluate the nutritional status through the lifecycle. ➤ Efficiently assess deficiencies in elderly women

M.Sc. (Home Science) Textile and Clothing Program Specific Outcomes:

- Students will be able to construct garments by using proper method which includes drafting, cutting and sewing of garments for industrial as well as home production.
- Textile student will have the basic knowledge related to processing and production techniques of fibers, yarns, fabrics and other textiles products.
- Students will be familiarized with the different concepts and processes of the Indian apparel Industry.
- Students will be trained in the skills related to value addition techniques on apparels and textiles.
- Students will be able to understand the relevance, specifications and importance of quality in apparel industries.
- Students with their leadership quality can become a successful entrepreneur.
- Students can utilize their creative skills in dyeing and printing units.
- Students can design and produce their own styles of apparels.
- students can work freelance or can work to teach batch of students in the area of handicrafts, embroidery, block printing, dyeing ,garment construction , knitting, crocheting etc,

COURSE OUTCOMES

SEMESTER-I

Paper I Textile Chemistry

- Students will be able to gain knowledge on the formation and modification of fibers
- Students will be able to evaluate Color used in Dyeing and printing
- Students will be able to Understand the technological aspects of fiber
- Students will be able to explain manufacturing process of fabric

Paper II Fabric Construction And Woven Fabric Analysis

- Students will gain knowledge about the woven textiles industry.
- Students will be able to learn about the importance of woven textiles and various associated terminologies.
- Students will be able to learn about the fabric classification and different fiber types with the Introduction of looms and its parts
- Students will be able to differentiate types of woven fabrics
- Students will be able to understand weaving technology To classify and identify various looms

Paper III Advance Apparel Design & Advance Apparel Construction

- Students will be able to learn about the commercial aspect of the woven textiles.
- Students will be able to visualize the Future trends in clothing technology
- Students will be able to explain the methods for garment construction

Paper IV Research Methods and Statistics

- Students will be able to identify different Types of research
- Students will be able to write Research projects.
- Students will be able to explain Research methodology
- Students will be able to make Research designs and identify Sampling technique

SEMESTER-II

Paper I Textile Testing and Quality

- the students will gain knowledge about the Quality and aspects of quality
- Students will be able to explain Different factors affecting quality
- Students will be able to explain Quality control and process control in

Control	<p>details</p> <ul style="list-style-type: none"> ➤ Students will be able to understand Textile testing, its importance and factors affecting the test results
Paper II Historic Textiles	<ul style="list-style-type: none"> ➤ Students will be able to Employ and practiced methodologies for the protection and longevity of historic costume and textiles in collections; ➤ Students will be able to interpret the historic context of costume and textiles
Paper III Fashion Designing	<ul style="list-style-type: none"> ➤ Students will be able to apply comprehensive abilities in creating and presenting product for entry-level positions in the fashion industry; ➤ Students will be able to work well together as emerging team players and innovative design thinkers. ➤ Students will be able to understand and implement new technologies relative to design development, material choices, and the manufacture and distribution of fashion; ➤ Students will be able to adapt their inspired knowledge and abilities to ongoing changes in global fashion and related creative industries; ➤ Students will be able to bring their evolving design point-of-view and work aesthetics to various types of imaginative challenges; and ➤ Students will be able to explore sustainability in their design development.
Paper IV Statistics and Computer Application	<ul style="list-style-type: none"> ➤ Students will be able to Understand and remember algorithms and its analysis procedure. ➤ Students will be able to understand concept of data structures ➤ Students will be able to design and implement various data structure algorithms.

SEMESTER-III

Paper I Knitting Technology	<ul style="list-style-type: none"> ➤ Students will be able to describe the classification, structure, properties and construction of various knitted products ➤ Students will be able to analyze fabrics and structures in clear knitted examples, and describe and document these ➤ Students will be able to carry out and run experimental design work in knitting technology, ➤ Students will be able to. develop and communicate a design idea to knitwear engineers for implementation, ➤ Students will be able to apply adequate technologies and materials in relation to their own design concept, ➤ Students will be able to document and reflect on technology in relation to the design process, ➤ Students will be able to demonstrate an understanding of sustainable materials and approaches.
Paper II Historic Costume	<ul style="list-style-type: none"> ➤ Students will be able Contribute original material to the field of textile and fashion history through research, writing, critical thinking, organization, and analytical technology; ➤ Students will be able to Analyze and identify fabric structure, material content, and method of manufacture of historic costume and textiles ➤ Students will be able to document for purposes of either conservation work or for descriptive analytical reports
Paper III	<ul style="list-style-type: none"> ➤ Students will be able to learn about the Origin of clothing, use of clothing

Social and Psychological Aspect Of Clothing	<p>among primitive people; Functions and theories of clothing; Clothing in relation to culture.</p> <ul style="list-style-type: none"> ➤ Students will be able to learn about the Psychological aspects of clothing-self respect, self-enhancement, self expression, gender desirability and individuality; Students will be able to understand the Socio-psychological aspects of clothing among children and significance of uniforms and national costumes. ➤ Students will be able to understand Clothing symbolism, fashion, fad, custom, tradition, culture contact, status, youth, and education, social agitation of women and technology and role of legislation. ➤ Students will be able to gain knowledge about the Clothes for conformity, mobility, aesthetic appearance; Health and sanitation related to clothing.
Paper – IV Fashion Communication	<ul style="list-style-type: none"> ➤ Students will be able to learn about fashion writing, typography, event design, ➤ Students will be able to learn the creative use of digital platforms, fashion illustration, fashion public relations and so on. ➤ Students will be able to learn Fashion Communication and can pursue Fashion Styling, Visual Communication, Space Design, Photography, Media and Digital Design, etc.

SEMESTER-IV

Paper I Dyeing and Printing	<ul style="list-style-type: none"> ➤ Students will be able to explain the effect of dyes and chemicals on the properties of textile materials, in both aesthetic and functional terms ➤ Students will be able independently carry out different types of dyeing, printing and processing of textile materials, ➤ Students will be able describe and analyze the effects that the choice of dyes, chemicals and processes have on the environment, and on the cost and lifespan of the product ➤ Students will be able apply adequate technologies and materials in relation to their own design concept, ➤ Students will be able document and reflect on technology in relation to the design process ➤ Students will be able to demonstrate an understanding of sustainable materials and approaches.
Paper II Garment Production Technology	<ul style="list-style-type: none"> ➤ Students will be able to introduce the methods of garments construction which includes drafting, cutting and sewing of garments for industrial as well as home production. ➤ Students will be able to explain the basic concepts related to processing and production techniques of fibers, yarns, fabrics and other textiles products. ➤ Students will be able to analyze the different concepts and processes of the Indian apparel Industry. ➤ Students will be able to generate skills related to value addition techniques on apparels and textiles. ➤ Students will be able to understand the relevance, specifications and importance of quality in apparel industries. ➤ Students will be able to develop leadership and entrepreneurship skills. ➤ Students will be able to explore their creative skills up to fullest potential and can sketch their ideas related to apparels.

	➤ Students will be skilled to sew any styles of apparels.
Paper III Fashion Retailing and Merchandizing	<ul style="list-style-type: none"> ➤ Students will be able to demonstrate their understanding of the fashion process, i.e., the fashion life cycle, the forces that inhibit, encourage and shape fashion change; and theories that address the source of new styles and their adoption within consumer markets. ➤ Students will be able to use appropriate terminology in identifying and describing design elements and principles pertaining to apparel design and selling environments. ➤ Students will be able to evaluate and select appropriate textile products given specific end uses and consumer markets. ➤ Students will be able to apply social science concepts and theories in anticipating the fashion product and shopping needs and preferences of specific consumer markets. ➤ Students will be able to demonstrate different functions of the merchandising process, including the development of buying plans, promotional materials and events and sales strategies for multiple retail channels. ➤ Students will be able to utilize an understanding of the textile and apparel sector's role in the global economy, as well as relevant trade legislation, in anticipating factors shaping sourcing decisions for textile and apparel materials and end-use products. ➤ Students will be able to utilize appropriate resources and technologies in carrying out the following: <ul style="list-style-type: none"> ➤ apply critical and creative thinking in identifying solutions to apparel industry-based problems and challenges ➤ demonstrate proficient written, oral and visual communication skills ➤ Students will be able to execute professional development through securing and successfully carrying out the responsibilities of a cooperative education or internship position at a fashion industry.
Paper – IV Mass Communication	<ul style="list-style-type: none"> ➤ Students will be able to introduce basic concepts of communication and its role in society ➤ Students will be able to introduce students to various processes and theories of communication

Faculty of Science

M.Sc.(Master of Science)

Program Outcomes

- The Faculty of Science offers PG in the following subjects- Botany (C043), Chemistry (C044), Mathematics (C050), Physics (C054), and Zoology (C056).
- The students can become competent Botanists, Chemists, Mathematician, Physicist and job related to Wildlife, Veterinarians, conservationist etc.
- The students can identify the research problems and can formulate using research tools to analyze research related issues, reaching conclusions and can give suggestions for the welfare of society.
- The Students can pursue their career as scientist after pursuing higher studies (M.Phil., Ph.D., Post Doc.).
- Students can opt various examinations like NET, GATE, ICMR, DBT, PSC, SSB, UPSC, IBPS, B.ED., M.ED and many others for promising careers in research, administration, defense, academics, banking sector.

M.sc. (Botany)- Program Specific Outcomes

- Students will be able to conduct experiments, analyze and interpret data for investigating problems in the field of Botany.
- Student of Botany can pursue higher studies (M.Phil., Ph. D) to attain research positions.
- Students can get jobs various fields of Botany like Ecologists/Park ranger/Forester/Nursery Manager/Taxonomist/Horticulturist/Plant Explorer/Geneticist/Plant biochemist/Molecular biologist/ Pharmacologist/ Conservationist and Entrepreneur (Extraction of valuable Plants and their parts Industries/Marketing of herbs/ Environment Consultant / Training centers/ Processing of Valuable Plant Parts/ Floricultural / Florist/ Mushroom Culture /Landscaping / Marketing of plant raw materials/ Herbal Cosmetic Industry).
- Besides Industrial sector these are ample opportunities in Academics, like in School Education Department and Higher Education Department.
- Students will be able to understand the wide potential of the subject Botany, and its implementation in sustainable development.

COURSE OUTCOMES

SEMESTER-1

Paper I (PG-101) : Biology & Diversity of Viruses, Bacteria and Fungi

The objective of this course is to provide exposure to the students on general characters, classification, and reproduction of various micro-organisms.

- Students will be able to evaluate the economic importance of viruses, Actinomycetes, Bacteria and fungi.
- Students will be able identify and apply the wide area of plant pathology related to these members, and role of micro organism in various fields of science.

Paper II(PG-102) : Biology & Diversity of Algae

The objective of this course is to give students an idea on diverse group of Algal members.

- Students will be able to explain the systematic, morphology reproduction, structure of selected members of algae.
- Students will be able to explain the life cycle pattern of algal members.
- Students will be able to plain different useful and harmful activities and their Ecological Significance.

Paper III(PG-103) - Biology & Diversity of Bryophyta & Pteridophyta

The objective of this course is to well verse the students about the Bryophyte & Pteridophyte morphological diversity and their biology.

- Students will be able to explain the general characteristics, structural variation, classification & reproduction in bryophytes and Pteridophytes.
- Students will be able to outline the role of Pteridophytes in the origin of seed habit.
- Students will be able to analyze significance of bryophytes as pioneer plants on land and their role in the origin.
- Students will be able to understand the evolutionary trends in plant

	<p>species on the earth.</p> <ul style="list-style-type: none"> ➤ Can understand the ecological importance of Bryophyte & Pteridophyte. ➤ Will be able to explain the economic & medicinal value of Bryophyte & Pteridophyte.
Paper IV (PG-104) - Biology and Diversity of Gymnosperms	<p>The Course objective of this is to enable students to figure prominent role of diverse gymnosperms in the socio-economic life of people and their role in understanding the evolutionary trends.</p> <ul style="list-style-type: none"> ➤ Students will be able to outline the general characters, distribution and classification of Gymnosperms. ➤ Students can analyze the Indian contribution to Gymnosperms. ➤ Students can identify prescribed gymnosperms of the syllabus and fossil gymnosperms.
SEMESTER-2	
Paper I(PG-201) Cell Biology and Genetics	<p>The objective of this course is to provide exposure to the students on plant cell, functions and vital processes of various cellular organelles, cell division and inheritance.</p> <ul style="list-style-type: none"> ➤ Students will be able to explain the structural organization of plant cell, various cellular compartments and cellular organelles. ➤ Students will be able to apply the knowledge of classical genetics at organism level and cell level.
Paper II(PG-202) plant Development & Reproduction	<p>The objective of this course is to equip the students with the knowledge in the field of plant development and reproduction spanning from the induction of flowering to fruit development.</p> <ul style="list-style-type: none"> ➤ Students can outline the scientific knowledge related to organization of the higher plant body at shoot and root level. ➤ Students can understand the reproductive phenomenon in angiospermic plant.
Paper III (PG-203): plant physiology-I	<p>Upon completion of this course, the students will be able to gain an insight in to the various physiological processes in plants.</p> <ul style="list-style-type: none"> ➤ Students will be able to apply the principles of thermodynamics. They will be able to explain the different mechanisms related to plant water relation, absorption, transpiration and mineral nutrition. ➤ Will be able to assess the importance of plant growth regulators and elicitors. ➤ Define flowering process and stress physiology.
Paper IV (PG-204) : Plant Ecology –I	<p>The course covers plant ecology on advanced level. The course deals with plants and their interaction with the remaining ecosystem.</p> <ul style="list-style-type: none"> ➤ Students will be able to demonstrate knowledge about ecosystem components, population and community ecology. ➤ Students can recognize the major biomes and vegetation types in diverse ecosystems. ➤ They would be able to interpret within the field and work with practical and theoretical problem solving with respect to different ecosystems.

SEMESTER-III	
Paper I (PG-301): Systematic of Angiosperms	<ul style="list-style-type: none"> ➤ Students can identify the flora of any region of India ➤ Students can utilize the knowledge about plant species in various fields of life. ➤ Will be able explain the evolutionary trends in plant species. ➤ Will be equip themselves with the knowledge about biodiversity of angiospermic flora and their grooming in the field of entrepreneurship.
Paper II (PG-302): Molecular biology and plant breeding	<p>The objective of this course is to place the students at a level where they can explain structure, synthesis and packaging of the hereditary material.</p> <ul style="list-style-type: none"> ➤ Students can identify use of tools and techniques of molecular biology in genetics as well as in plant breeding. ➤ They can explain modern methods of plant breeding and compare them with the traditional methods.
Paper III (PG-303): Plant Physiology, Biochemistry and Metabolism	<p>The objective of this course is focus on physiological and metabolic process of plant and students will be exposed to the importance of biological macromolecular. After completing of the course students will be able to-</p> <ul style="list-style-type: none"> ➤ Discuss enzymology, practical applications and its biological significance. ➤ Explain the principles of photosynthesis, photochemistry and respiration. ➤ Describe the bio-molecular, chemistry of carbohydrates, lipids fatty acids, their structure, classification and function. ➤ Explain the fixation of nitrogen and metabolism of Sulphur.
Paper IV (PG-304): Plant Ecology- II (Conservation & utilization of Plant Resources)	<p>The objective of this course is to take students at the advance level of ecology, It deals with the conservation and utilization of plant resources and interaction between plants and the remaining ecosystem. On completion of this course students will be able to-</p> <ul style="list-style-type: none"> ➤ Discuss about the plant biodiversity, its concepts and status. ➤ Explain sustainable development and utilization of plant resource ➤ Apply the principles of conservation and critically understand different methods of conservation. ➤ Critically analyze the consequences of climate change and pollutants. ➤ Gain background knowledge and understanding of principles of Interpret Remote Sensing imagery and its real world applications.
SEMESTER-IV	
Paper I (PG-401): Biotechnology and Tissue Culture	<p>The objective of this course is to provide knowledge about information transfer from cell to cell and macromolecule.</p> <ul style="list-style-type: none"> ➤ Enable students to apply techniques of plant tissue culture. ➤ Students can use its applied aspect in the field of conservation of RET plant species and micro propagation of plants for the extraction of secondary metabolites. ➤ The students can identify scope and application of biotechnology in

	different fields.
Paper II (PG-402): Applied Botany and Instrumentation	<p>This course deals with the varied aspects of applied Botany, to groom students to be an entrepreneur.</p> <ul style="list-style-type: none"> ➤ Students will be able to apply the skills in the field of herbal cosmetics and beverages, herbal dyes for use in textile industry. ➤ Will be able to apply the skills in the extraction of essential oils in Aromatherapy. ➤ Will be able to apply the techniques of Organic farming and bio fertilizers. ➤ Will be able to develop the skills to use computer and to import this knowledge on computer based applications in biological science. ➤ Students will be able to discuss the basics of computer operations, explain the knowledge about software and hardware. ➤ Students will be able to describe the principles used in microscopy, spectroscopy, electrophoresis and colorimetry. ➤ will be able to apply the knowledge of instrumentation in analytical work.
Paper III (PG-403): Environmental Science	<p>Objective of this course is to create awareness among the students about the environment. By the end of the course-</p> <ul style="list-style-type: none"> ➤ Students will have a better appreciation for the environment and become responsible citizens. ➤ Explain the role of climate change and will be able to address the environmental issues. ➤ Will be able to analyze case studies representation of toxicology, ➤ Will be able to discuss different environment laws, environmental education and related organisations.
Paper IV (PG-404): Ethnobotany	<p>This course deals with the varied aspects of ethnic values and traditions related to plant world.</p> <ul style="list-style-type: none"> ➤ Students will be able to explain the ethnomedicinal use of plants endemic to various regions of India. ➤ They will be able to know the various ethnic society and their phytodiversity related cultural practices. ➤ The students will be the ambassador for the conservation of traditions related to nature.

M.Sc. (Chemistry)- Program Specific Outcomes

- Demonstrate and apply the fundamental knowledge of the basic principles in various fields of chemistry .
- Create awareness and sense of responsibilities towards environment and apply knowledge to solve the issues related to environmental pollution.
- Apply knowledge to build up small-scale industry for developing endogenous product.
- Apply various aspects of chemistry of natural products isolations, like:- pharmaceuticals, dyes, textiles, polymers, petroleum products, forensic etc. and also to develop interdisciplinary approach of the subject.
- Develop their critical reasoning , judgement & communication skills.
- Augment the recent developments in field of green and eco- friendly reactions, pharmaceuticals, bioinorganic chemistry and relevant fields of research and development.
- Enhance scientific temper among students so as to develop a research culture and implementation of policies to tackle burning issues at global and local levels.

COURSE OUTCOMES

SEMESTER – I

Paper (I): Inorganic Chemistry-1	<p>The objective of this course is to provide exposure to students on bonding in main group compounds, metal ligand equilibrium in solution, reaction mechanism of transition metal complexes, HSAB theory and metal-ligand bonding.</p> <ul style="list-style-type: none">➤ Students will be able to discuss the VSEPR theory, $d\pi$-$p\pi$ bond and Bent's rule.➤ Students will be able to determine the stepwise and overall formation constant, the chelate effect.➤ Students will be able to explain the energy profile of reaction, reactivity of metal complex, inert and labile complexes, Redox reaction, electron transfer reaction, acid hydrolysis and base hydrolysis.➤ Students will be able to discuss the limitations of Crystal Field theory, MOT for bonding in octahedral, tetrahedral and square planar complexes.➤ Students will be able to identify acids and bases as hard or soft as per HSAB concept.
Paper (II): Organic Chemistry-I	<p>The objective of this course is to provide information about nature of bonding in organic molecules, stereochemistry, conformational analysis, reaction mechanism, aliphatic nucleophilic substitution.</p> <ul style="list-style-type: none">➤ Students will be able to analyze delocalized chemical bonding, conjugation and hyper conjugation.➤ Students will be able to discuss stereochemistry of the compounds containing Nitrogen, Sulphur and Phosphorus.➤ Students will be able to explain conformational analysis of cycloalkanes.➤ Analyze the reactivity of carbo cations, carbo anions and free radicals.➤ Students will be able to design the potential energy diagrams, transition states and intermediates.➤ Students will be able to evaluate the SN_1, SN_2 and mixed SN_1 and SN_2 mechanisms.

Paper (III): Physical Chemistry-I	<p>The objective of this course is to provide information about Quantum Mechanics, MOT angular momentum classical and statistical thermodynamics.</p> <ul style="list-style-type: none"> ➤ Students will be able to evaluate the Schrodinger equation and postulate of quantum mechanics. ➤ Students will be able to apply the perturbation theory for first order and degenerate. ➤ Students will be able to discuss Huckel theory of conjugated system and charge density. ➤ Students will be able to evaluate the ordinary angular momentum and generalized angular momentum. ➤ Students will be able to explain the Debye Huckel theory for activity coefficient of electrolytic solutions. ➤ Students will be able to evaluate Fermi Dirac statistics, Bose Einstein statistics and partition functions.
Paper (IV): Group Theory and Spectroscopy - 1	<p>The objective of this course is to provide exposure to students on symmetry and group theory in chemistry, microwave, IR, Raman, electronic, molecular and photoelectron spectroscopy.</p> <ul style="list-style-type: none"> ➤ Students will be able to identify symmetry elements, symmetry operation and representation of groups by matrices. ➤ Students will be able to discuss the classification of molecules. ➤ Students will be able to evaluate the Zero-point energy, vibrational energies and Morse potential energy ➤ Students will be able to explain selection rule and classical and quantum theories of Raman effect. ➤ Students will be able to discuss photo- electric effect and photoelectron spectra of simple molecules
Paper (v): Mathematics for Chemists	<p>The objective of this course is to give information about mathematical aspects in chemistry.</p> <ul style="list-style-type: none"> ➤ Students will be able to evaluate the dot, cross vectors and matrix algebra. ➤ Students will be able to demonstrate the Bohr's radius and most probable velocity from Maxwell's distribution. ➤ Students will be able to evaluate the basic rules for integration and integration by parts. ➤ Students will be able to analyze the permutation and probability
SEMESTER – II	
Paper (I): Inorganic Chemistry-II	<p>The objective of this course is to provide information about electronic spectral studies, magnetic properties, metal π-complexes and metal clusters.</p> <ul style="list-style-type: none"> ➤ Students will be able to evaluate the spectroscopic ground states, Orgel and Tanabe-Sugane diagrams for transition metal complexes. ➤ Students will be able to determine the orbital contribution to magnetic moment and magnetic exchange coupling. ➤ Students will be able to explain structure and bonding in metal π-

	<p>complexes.</p> <ul style="list-style-type: none"> ➤ Students will be able to discuss higher boranes, carboranes, metalloboranes. ➤ Students will be able to analyze the applications of ORD and CD for the determination of absolute configuration of complexes and isomerism due to non-planarity of chelate rings.
Paper (II): Organic Chemistry-II	<p>The objective of this course is to provide exposure to students on aromatic electrophilic substitution reactions, free radical reactions, addition reactions and pericyclic reactions.</p> <ul style="list-style-type: none"> ➤ Students will be able to explain arenium ion mechanism, diazonium coupling and ortho/para attack. ➤ Students will be able to demonstrate the types of free radicals and effect of solvent on reactivity. ➤ Students will be able to discuss the mechanism and stereo-chemical aspects of addition reactions involving electrophiles, nucleophile and free radicals ➤ Students will be able to analyze the molecular orbital symmetry, FMO and PMO approach and classification of pericyclic reactions.
Paper (III): Physical Chemistry-II	<p>The objective of this course is to give information about chemical dynamics, surface chemistry, macromolecules and electrochemistry.</p> <ul style="list-style-type: none"> ➤ Students will be able to evaluate the methods of determining rate laws, Arrhenius equation, kinetic and thermodynamic control of reaction. ➤ Students will be able to discuss surface tension, capillary action and BET equation. ➤ Students will be able to explain polymers, kinetics of polymerization and mechanism of polymerization. ➤ Students will be able to discuss the Thermodynamics criteria for non-equilibrium states. ➤ Students will be able to evaluate the electrochemistry of solutions, Butler Volmer equation and Tafel Plot.
Paper (IV): Spectroscopy-II and Diffraction Methods	<p>The objective of this course is to provide information about NMR, NQR, ESR spectroscopy and X-Ray and electron diffraction.</p> <ul style="list-style-type: none"> ➤ Students will be able to explain nuclear spin, shielding and de-shielding effect and chemical shift. ➤ Students will be able to discuss the quadrupole nuclei and quadrupole moment. ➤ Students will be able to evaluate zero field splitting and Kramer's degeneracy. ➤ Students will be able to evaluate Bragg condition, Miller indices and Debye Scherrer method of X-ray structural analysis of crystals index reflections. ➤ Students will be able to analyze the scattering intensity, scattering angle and elucidation of structure of magnetically ordered unit cells.
Paper (V): Computer for Chemists	<p>The objective of the course is to give information about computing, computer programming and use of Computer programs and internet.</p> <ul style="list-style-type: none"> ➤ Students will be able to discuss the application of internet for chemistry. ➤ Students will be able to explain operation of PC data processing, running

	<p>of standard programs and packages such as MS Word, MS Excel etc.</p> <ul style="list-style-type: none"> ➤ Students will be able to create codes using languages FORTRAN, involving simple formulae in chemistry. ➤ Students will be able to explain base structure and functioning of computer.
SEMESTER – III	
Paper (I): Applications Of Spectroscopy – I (Inorganic Chemistry)	<p>The objective of this course is to provide information about electronic, vibrational, NMR, Mossbauer spectroscopy.</p> <ul style="list-style-type: none"> ➤ Students will be able to explain the electronic spectra studies for d1- d9 systems in octahedral, tetrahedral and square planer complexes. ➤ Students will be able to identify the symmetry and shape of AB₂, AB₃, AB₄, AB₅ and AB₆. ➤ Students will be able to discuss the introduction, definition of chemical shift and its mechanism. ➤ Students will be able to explain effect of deuteration and complex spin and spin interactions between two, three, four and five nuclei. ➤ Students will be able to analyze the basic principle of spectral parameters and spectrum density.
Paper (II): Photochemistry	<p>The objective of this course is to give exposure to students on photochemical reactions, determination of reaction mechanism, photochemistry of alkene, carbonyl compounds.</p> <ul style="list-style-type: none"> ➤ Students will be able to explain the types of excitations and quantum yield. ➤ Students will be able to discuss the rate constants and effect of light intensity on the rate of photochemical reactions. ➤ Students will be able to demonstrate the intramolecular reaction of alkene and carbonyl compounds, intermolecular cycloaddition reactions-dimerisations. ➤ Students will be able to discuss Barton reaction and photo degradation of polymers and photochemistry of vision.
Paper (III): Environmental Chemistry	<p>The objective of this course is to give information about atmospheric pollution, acid rain, environmental toxicology and soil.</p> <ul style="list-style-type: none"> ➤ Students will be able to discuss about atmospheric layer, biogeochemical cycles of carbon, nitrogen and sulphur. ➤ Students will be able to analyze the air pollutants, effect on visibility, climate and health. ➤ Students will be able to discuss the acid rain precursors and acid rain control strategies. ➤ Students will be able to explain redox chemistry in natural waters and BOD and COD determination. ➤ Students will be able to discuss soil composition micro and macro nutrients and soil pollution by fertilizers. ➤ Students will be able to explain toxic heavy metals and their biochemical and damaging effects.
Paper (IV):	<p>The objective of this course is to give information about terpenoids,</p>

Chemistry of Natural Products	<p>carotenoids, alkaloids, steroids, and plant pigments.</p> <ul style="list-style-type: none"> ➤ Students will be able to explain classification, nomenclature, isolation and general methods of structure determination of terpenoids, carotenoids, alkaloids and steroids. ➤ Students will be able to discuss the synthesis of Citrol, Phytol, Menthol, Nicotine, Atropine and Morphine ➤ Students will be able to analyze the structure of plant pigments such as Quercetin, Myricetin, Quercelin, Vitexin. ➤ Students will be able to discuss about occurrence, biogenesis and physiological effects of prostaglandins.
Paper (V): Heterocyclic Chemistry	<p>The objective of this course is to give exposure to students on aromatic and non-aromatic small ring and six membered heterocycles.</p> <ul style="list-style-type: none"> ➤ Students will be able to discuss nomenclature for monocyclic, fused and bridged heterocycles. ➤ Students will be able to explain strain bond angle and Torsional strains. ➤ Students will be able to discuss the reactions and synthesis of Aziridines, Oxiranes and Thiranes. ➤ Students will be able to explain the classification and chemistry of meso-ionic heterocycles. ➤ Students will be able to synthesize the diazines, triazines. ➤ Students will be able to discuss heterocyclic systems containing P, As, Sb and B.
SEMESTER – IV	
Paper (I): Application of Spectroscopy-II (Organic Chemistry)	<p>The objective of this course is to give information about UV, IR, NMR, Carbon-13 and mass spectroscopy.</p> <ul style="list-style-type: none"> ➤ Students will be able to discuss various electronic transitions, Beer-Lambert law, Ultraviolet bands for carbonyl compounds. ➤ Students will be able to explain vibrational frequencies of alkanes, alkenes, alkynes and aromatic compounds. ➤ Students will be able to analyze the nuclear magnetic resonance of paramagnetic substances in solution. ➤ Students will be able to discuss general information of C-13 spectroscopy and two-dimensional NMR spectroscopy- COSY, NOESY, DEPT techniques. ➤ Students will be able to explain the ion production E1, C1, FD and ESI factors affecting fragmentation.
Paper (II): Solid State Chemistry	<p>The objective of this course is to give information about solid state reactions, crystal defects, electronic properties and liquid crystals.</p> <ul style="list-style-type: none"> ➤ Students will be able to discuss the general principles and kinetics of solid-state reactions. ➤ Students will be able to explain perfect and imperfect crystals, defect-point, line and plane defects. ➤ Students will be able to explain metals, insulators and semiconductors. ➤ Students will be able to analyze electrically conducting solids. ➤ Students will be able to discuss the types of liquid crystals.
Paper (III):	<p>The objective of this course is to give information about metal ions in</p>

Biochemistry	<p>biological systems, Bioenergetics and ATP cycle, enzymes, co- enzymes, chemistry of cell and its constituents.</p> <ul style="list-style-type: none"> ➤ Students will be able to discuss the bulk and trace metals. ➤ Students will be able to explain DNA polymerization, glucose storage. ➤ Students will be able to discuss the biological nitrogen fixation and its mechanism. ➤ Students will be able to analyze the chemical and physical catalyst, properties of enzyme and mechanism of enzyme action. ➤ Students will be able to apply the large scale production and purification of enzymes. ➤ Create techniques of immobilization of enzymes. ➤ Students will be able to discuss the structure and function of proteins, enzymes, DNA and RNA in living systems
Paper (IV): Analytical Chemistry	<p>The objective of this course is to provide information about the role of analytical chemistry, food analysis, errors, water pollution, drug analysis and clinical chemistry.</p> <ul style="list-style-type: none"> ➤ Students will be able to evaluate the errors and calibration of glassware. ➤ Students will be able to discuss, moisture, air, carbohydrates and contamination of food stuff. ➤ Students will be able to explain source of water pollution and their effects. ➤ Students will be able to analyze the pH of soil. ➤ Students will be able to discuss composition of blood, collection and preservation of samples and blood gas analysis of trace elements in the body. ➤ Students will be able to explain narcotics and dangerous drugs.
Paper (V): Medicinal Chemistry	<p>The objective of this course is to provide information about pharmacodynamics, antibiotics and anti-bacterials.</p> <ul style="list-style-type: none"> ➤ Students will be able to discuss the relationship between chemical structure and biological activity (SAR). ➤ Students will be able to explain the introduction and elementary treatment of enzyme stimulation. ➤ Students will be able to explain the antibiotics β-lactum, Penicillins and antibacterial streptomycin. ➤ Students will be able to discuss antifungal polyenes and antimalarials, chemotherapy of malaria. ➤ Students will be able to analyse the nonsteroidal anti-inflammatory drugs (Diclofenac sodium, Ibuprofen and Netopam). ➤ Students will be able to discuss the antihistaminic and anti- asthmatic agents like Tefenadine, Cinnarizine, Salbutamol.

M.sc. (Mathematics)- Program Specific Outcome

- Students will be able to analyze the problems and interpret data for investigating problems in the field of Mathematics.
- Student of Mathematics can pursue higher studies (M.Phil., Ph. D) to attain research positions. Students can get jobs in various fields both in the private and public sector. Some of the common job positions or profiles for a math enthusiast are Assistant Professor, Research Analyst, Assistant Scientist, Training Manager etc. They can apply for jobs in Banking sector, Aerospace and Defense, Automobile, IT and Software, Railways, and the Manufacturing sector. As Mathematician, one can be involved in research and development in specialized branches such as Commutative Algebra and Algebraic Geometry, Discrete Mathematics and Coding Theory, Groups, Semi groups and Topology, Applied Mathematics and Differential Equations, Functional Integration, Operator Theory/Operator Algebras, Mathematical Biology, Mathematics Education.
- Besides Industrial sector there are ample opportunities in Academics, like in School Education Department and Higher Education Department.
- Students will be able to understand the wide potential of the subject Mathematics, and its implementation in sustainable development.

COURSE OUTCOMES

SEMESTER-I

Paper I : Advanced Abstract Algebra-I

The objective of this course is to provide Normal and subnormal series of groups and Perfect and Finite Fields.

- Students will be able to solve problems related to concept of groups, Nilpotent groups.
- Student will be able to facilitate the understanding of the structure of a problem where the problem involves a permutation group: e.g. Nature of the roots of a polynomial equation.

Paper II: Real Analysis

The objective of this course is to provide knowledge of Riemann-Stieltjes integral and its properties

- Students will be able to solve problems related to convergence of series and sequence of functions.
- Students will be able to apply Implicit function and inverse function theorem.
- Students will be able to solve problems related to functions of several variables in Real Analysis.

Paper III : Topology-I

The objective of this course is to provide knowledge of Sets and Topological Spaces.

- Students will be able to give proofs of Zorn's lemma and Lindelof's theorem.
- Students will be able define Countable and Uncountable sets and infinite sets.
- Students will be able to understand the concept of path connectedness and locally connected spaces.

Paper IV: Complex Analysis		<p>The objective of this course is to provide knowledge of Complex Integration and Residues</p> <ul style="list-style-type: none"> ➤ Students will be able to proof Morera's Theorem, Cauchy_Goursat theorem, Cauchy's Residue Theorem. ➤ Students will be able to state properties of Bilinear transformations. ➤ Students will be able to give definition and examples of conformal mappings.
Paper Advanced Discrete Mathematics-I	V:	<p>The objective of this course is to Students will be aware about Semi groups ,Lattices, Boolean Algebra, and Graph Theory.</p> <ul style="list-style-type: none"> ➤ Students will be able to understand the concept of Homomorphism of Semi groups and monoids. ➤ Students will be able to state properties of Lattices as Algebraic systems. ➤ Students will be able to understand the concept of Boolean Algebra to Switching theory. ➤ Students will be able to give definition and examples of Graph and its various Types.
SEMESTER-II		
Paper I: Advances Abstract Algebra-II		<p>The objective of this course is to provide understanding of Modules and Algebra of Linear Transformation</p> <ul style="list-style-type: none"> ➤ Students will be able to define and give examples of Modules, Sub-Modules, Cyclic modules and Primary modules. ➤ Students will be able to give proofs of Hilbert basis theorem, Noether_Laskar theorem and Wedderburn Artin theorem.
Paper II: Lebesgue Measure and Integration		<p>The objective of this course is to aware students about Lebesgue outer measure and integration of Non Negative Functions</p> <ul style="list-style-type: none"> ➤ Students will be able to define and give examples of outer measure, Measurable sets, Convex functions and Uniform Convergence. ➤ Students will be able to proof Jensen's inequality, Holder and Minkowski inequalities. ➤ Students will be able to solve the problem related to Integration of series.
Paper Topology-II	III:	<p>The objective of this course is to provide understanding of separation axioms, Net and Filters.</p> <ul style="list-style-type: none"> ➤ Students will be able to define separation axioms, T_0 ,T_1 ,T_2 ,T_3 ,T_4 spaces. ➤ Students will be able to state properties of separation axioms and T_0 ,T_1 ,T_2 ,T_3 ,T_4 spaces. ➤ Students will be able to solve Homotopy of paths, Compactness and proof of theorem of Algebra.
Paper IV: Complex Analysis-II		<p>The objective of this course is to provide understanding of Gamma function and its Properties and Canonical Products.</p> <ul style="list-style-type: none"> ➤ Students will be able to give proofs of Weierstrass Factorization

	<p>theorem, Mittag-Leffler's Theorem, Bloch's theorem, Picard theorem.</p> <ul style="list-style-type: none"> ➤ Students will be able to state Schwartz reflection Principle, Jensen's Formula Harmonic function
Paper V: Advanced Discrete Mathematics-II	<p>The objective of this course is to provide knowledge about Matrix Representation and Theory of Automata.</p> <ul style="list-style-type: none"> ➤ Students will be able to understand the concept of Discrete Numerical Functions. ➤ Students will be able to state properties of Lattices as Algebraic systems. ➤ Students will be able to understand the concept of Boolean Algebra to Switching theory. ➤ Students will be able to give definition and examples of Graph and its various Types.
SEMESTER-III	
Paper I :Functional Analysis -I	<p>The objective of this course is to provide understanding about Normed Linear Spaces, subspaces and Linear Functionals.</p> <ul style="list-style-type: none"> ➤ Students will be able to understand definition and properties of Normed linear spaces, Banach Spaces, Linear Operator, Linear functionals and Hilbert Spaces. ➤ Students will be able solve examples of Banach Spaces and Dual Spaces. ➤ Students will be able to give the proof of Riesz's Lemma and understand compactness.
Paper II: Integral Transform-I	<p>The objective of this course is make students understandable about Laplace Transform and Laplace equations in two dimensions.</p> <ul style="list-style-type: none"> ➤ Students will be able to solve the problem of Laplace Transformation and Laplace Equation. ➤ Students will be able to apply differential equation, Integral equation and Heat conduction equation in one dimension.
Paper III: Advanced Graph theory -I	<p>The objective of this course is to provide understanding of concept of Tree and Planar Graphs</p> <ul style="list-style-type: none"> ➤ Students will be able to define Properties of Tree and Cut- Sets. ➤ Students will be able to understand Euler Graph , Hamiltonian Paths and Kuratowski's two graph .
Paper IV: Operations Research	<p>The objective of this course is to provide understanding of model in Operation & Research</p> <ul style="list-style-type: none"> ➤ Students will be able to understand Characteristics of Operation & Research ➤ Students will be able to solve Linear Programming Problem, Simplex Methods and Fundamental Property of Duality.
Paper V: Theory of Linear Operators-I	<p>The objective of this course is to make students understandable about Spectral Theory and its properties of Bounded Linear Operators</p> <ul style="list-style-type: none"> ➤ Students will be able to understand Regular Value Resolvent Set. ➤ Students will be able understand complex Banach Space and Banach Algebra .

	➤ Students will be able to understand properties of compact linear operators.
SEMESTER IV	
Paper I: Functional Analysis -II	<p>The objective of this paper will give the students the fare idea of concept of Hilbert adjoint operator and Zorn's Lemma</p> <ul style="list-style-type: none"> ➤ Student will be able to define and give examples self adjoint operator, Unitary operator, Normal operator and Positive operator. ➤ Student will able to give proof of Hahn Banach Theorem, Category Theorem and Open mapping theorem. ➤ Student will able to define strong & weak convergence of operators.
Paper II: Integral Transform-II	<p>The objective is to provide an understanding of various concepts of Fourier Transform</p> <ul style="list-style-type: none"> ➤ Student will be able to solve problems related to Finite Fourier Transform and Boundary Value Problem. ➤ Student will be able to solve Convolution Theorem and Parseval's identity for Fourier Transform.
Paper III: Advanced Graph Theory-II	<p>The objective is to demonstrate & Matrix Representation of Graphs and Trees as Directed Graph.</p> <ul style="list-style-type: none"> ➤ Students will develop ability to understand Cut set matrix and Chromatic Number. ➤ Students will able to solve Four color problem and fundamental Circuits in Digraphs.
Paper IV: Operation Research-II	<p>The objective of this paper is to give knowledge of solving various problem of operation research</p> <ul style="list-style-type: none"> ➤ Students will be able to solve Transportation problem, assignment problem and PERT/CPM path problem. ➤ Students will be able to concept of Game theory and its solution by linear programming.
Paper V: Theory of Linear Operators-II	<p>The objective of this course is to aware students about further knowledge of Spectral properties of compact Linear operators, Positive operators and Projection operators.</p> <ul style="list-style-type: none"> ➤ Students will be able to solve theorems of Fredholm type and understand the concept of Bounded Self-adjointed Linear operators. ➤ Students will be able to perform product and square root of Positive operators. ➤ Students will be able to understand properties of Projection.

M.Sc. (Physics) Program Specific Outcome

- Students will be able to conduct experiments, analyze and interpret data for investigating problems in the field of Physics.
- Student of Physics can pursue higher studies (M.Phil. Ph. D) to attain research positions. Students can get jobs in various fields of Physics both in the private and public sector. Some of the common job positions or profiles for a physics graduates are in College lecturer and Teaching Fields, Scientific Positions as Research Associates in various Research institutes. Assistant Professor. They can apply for jobs in Aerospace and Defense, Automobile, IT and Software, Railways, Nuclear and Renewable energy, Oil and Gas, Electronics and Telecommunications and the Manufacturing sector.
- Besides Industrial sector these are ample opportunities in Academics, like in School Education Department and Higher Education Department.
- Students will be able to understand the wide potential of the subject Physics, and its implementation in sustainable development.

COURSE OUTCOMES

SEMESTER-I

Paper I (PG-101) :Mathematical Physics

The objective is to provide students the ability to develop the mathematical skills necessary to approach problems in advanced physics courses.

- The students will be able to understand and apply the mathematical skills to solve quantitative problems in the study of physics.
- The students will be able students to apply integral transform to solve mathematical problems of interest in physics.
- The students will be able to use Fourier transforms as an aid for analyzing experimental data.
- The students should be able to solve differential equation of various types.
- Describe basics of group theory, Special functions, and Recurrence relations.

Paper II(PG-102) : Classical Mechanics

The objective aims to develop an understanding of Lagrangian and Hamiltonian formulation which allow for simplified treatments of many complex problems in classical mechanics and provide the foundation for the modern understanding of dynamics.

- The students will be able to apply the Variational principles to real physical problems.
- The students will be able to model mechanical systems, both in inertial and rotating frames, using Lagrange's and Hamilton's equations.

Paper III(PG-103) - Quantum Mechanics

The objective is to provide an understanding of the formalism and language of non-relativistic quantum mechanics and understand the concepts of time-independent perturbation theory and their applications to physical situations.

- The students will be able to formulate and solve problems in quantum mechanics using Dirac representation.
- The students will be able to grasp the concepts of spin and angular momentum, as well as their quantization and addition rules.
- The students will be familiar with various approximation methods applied to atomic, nuclear and solid-state physics.

Paper IV(PG-104) - Electronics Devices	<p>The objective is to develop an understanding of fundamentals of electronics in order to deepen the understanding of electronic devices that are part of the technologies that surround us</p> <ul style="list-style-type: none"> ➤ The Students will be able to use techniques for electronic circuits; and formulate the concepts of Field Effect Transistors (FET); identify its major properties and main types of FET circuits. ➤ The Students will develop ability to describe the behavior of special Purpose Diode- LDR, LED, and Solar Cells. ➤ The Students will be able to recognize various storage devices like RAM , ROM, Hybrid memories. ➤ The Students will be able to understand electro-optics, magneto-optics and acousto-optics effects material and properties
SEMESTER-II	
Paper I(PG -201)- Quantum Mechanics-II	<p>The objective is to understand the concepts of the time-dependent perturbation theory and their applications to physical situations and the basics of scattering theory.</p> <ul style="list-style-type: none"> ➤ The students will be able to grasp the concepts of Dirac equation and Klein Gordon equation. ➤ The students will be familiar with various approximation methods applied to atomic, nuclear and solid-state physics.
Paper II(PG -202)- Statistical Mechanics	<p>The objective is to have an appreciation for the modern aspects of equilibrium and non-equilibrium statistical physics.</p> <ul style="list-style-type: none"> ➤ The students will be able to describe the features and examples of Maxwell-Boltzmann, Bose-Einstein and Fermi-Dirac statistics ➤ The students will be able to work out equations of state and thermodynamic potentials for elementary systems of particles; and use and develop mean field theory for first and second order phase transitions.
Paper III(PG -203)- Electrodynamics and Plasma Physics	<p>The objective is to evaluate fields and forces in Electrodynamics and Magneto dynamics using basic scientific method. To provide concepts of relativistic electrodynamics and its applications in branches of Physical Sciences.</p> <ul style="list-style-type: none"> ➤ The students will be able to explain and solve advanced problems based on classical electrodynamics using Maxwell's equation. ➤ The students will be able to analyze radiation systems in which the electric dipole, magnetic dipole or electric quadruple dominate. ➤ The students will have an understanding of the covariant formulation of electrodynamics and the concept of retarded time for charges undergoing acceleration.
Paper IV(PG -204)- Atomic And Molecular Physics	<p>The objective is to get the better understanding of the fundamental aspects of atomic and molecular physics and to study spectroscopy of the multi-electron atoms and diatomic molecules</p> <ul style="list-style-type: none"> ➤ The students will have an understanding of quantum behavior of atoms in external electric and magnetic fields. ➤ The students will understand important concepts of Atomic and molecular physics, IR, Raman and Electronic Band Spectra of Dia Atomic molecule will be

	<p>studied.</p> <ul style="list-style-type: none"> ➤ Also NMR and ESR technique will be introduced.
SEMESTER-III	
Paper I(PG -301)- Condensed Matter Physics-I	<p>The objective is to provide extended knowledge of solid state physics by understanding of structure, thermal and elastic properties of matter.</p> <ul style="list-style-type: none"> ➤ Student will have achieved the ability to differentiate between different lattice types and explain the concepts of reciprocal lattice and crystal diffraction. ➤ The students will be able to formulate basic models for electrons and lattice vibrations for describing the physics of crystalline materials; and predict electrical and thermal properties of solids and explain their origin. ➤ The students will be able to explain concept of energy bands and their effect on electrical properties.
Paper II(PG -302)- : Nuclear and Particle Physics	<p>The objective is to provide an understanding of static properties of nuclei, nuclear decay modes, nuclear force and nuclear models and to provide broad understanding of basic experimental nuclear-detection techniques</p> <ul style="list-style-type: none"> ➤ The students will have an understanding of the structure of the nucleus, radioactive decay, nuclear reactions and the interaction of nuclear radiation with matter; and develop an insight into the building block of matter along with the fundamental interactions of nature. ➤ This course gives knowledge on fundamental principles of various particle accelerators and the motion of charged particles in electromagnetic field. ➤ The students will be able to understand the classification and fundamental properties of elementary particles.
Paper III(PG -303)- : Digital Electronics	<p>At the end of this course, the student will be able to understand the basic of digital circuit.</p> <ul style="list-style-type: none"> ➤ Students will be capable to design different type of digital logic circuit ➤ Student will learn about basics knowledge of Digital Electronics. ➤ Student will develop ability to understand, analyze and design various combinational and Sequential Circuit.
Paper IV(PG -304)- Atomic And Molecular Physics	<p>The objective is to provide an understanding of the fundamental aspects of atomic and molecular structure.</p> <ul style="list-style-type: none"> ➤ Students will have the understanding of the interaction of atomic and molecular systems with external homogenous static electric, magnetic fields and electromagnetic radiations ➤ Student will be familiar with different type of atomic and diatomic models and their spectra. ➤ Student will also be familiar NMR ,ESR techniques and Raman and Mossbauer Spectroscopy.
SEMESTER IV	
Paper I(PG -401)- : Condensed Matter Physics-II	<p>The objective of this paper will give students fair idea of concept of super conductivity, types of super conductors' theory, and AC and DC effects.</p> <ul style="list-style-type: none"> ➤ The student will have the understanding of Weiss theory of Ferromagnetism,

	<p>Domain and Bloch wall energy.</p> <ul style="list-style-type: none"> ➤ The student will be able to understand Curie Weiss Law Ferri and Anti Ferrimagnetism. ➤ The student will be able to learn about Basics physics behind Nano material, and used different techniques for synthesis and characterization of Nano material and tube. ➤ The student will be able to gain the knowledge of basic principles of material science in thin film technology and used various techniques to synthesis thin films of desired characteristics and various properties like electrical conductivity and hall coefficient quantum size effect in thin films.
Paper II(PG -402)- : Laser Physics	<p>The objective is to provide an understanding of various concepts of Laser Physics</p> <ul style="list-style-type: none"> ➤ Student will be able to analyze the intensity variation of light using laser. ➤ Student will be able to explain working principles knowledge and conceptual understanding in Laser Physics. ➤ Students approach an ability to analyzes quantitatively and to design such Lasers ➤ Student comes to know basic idea about non liner optics.
Paper III(PG -403)- Computer Programming and Informatics	<p>The objective is to demonstrate an understanding of computer programming language concepts.</p> <ul style="list-style-type: none"> ➤ Students will be able to develop basic understanding of computers, the concept of algorithm and logical thinking. ➤ Students will develop ability to design Computer programs, analyze and interprets the concept of variable declarations, initialization, operations and their usage and able to use the concept of array of structures. ➤ Students will be able to build an understanding of the fundamental concepts of computer networking and familiarize with the basic taxonomy and terminology of the computer networking area. ➤ Students will be able Use knowledge of HTML and HTML editor to create websites for current professional and industry standards and use critical thinking skills to design and create websites.
Paper IV(PG -404)- Title of paper: Digital Electronics	<p>The objective of this elective paper comprising OP-AMP and Microprocessor specializes the student in Digital Electronics</p> <ul style="list-style-type: none"> ➤ Students will be able to understand integrated components of OP-AMP design and packaging of IC 741 understand various modes of OP-AMP and its linear/ Non Linear applications. ➤ Students will be able to understand and analyze IC 741 operational amplifier and its characteristics. ➤ Students will be able to design and understand various linear and non linear application of OP-AMP using IC 741. ➤ Students will be able to elucidate and design the active filter and oscillator. ➤ Students will be able to Introduce Microprocessor 8086 - architecture and addressing modes and simple assembly language programming.
M.Sc. (Zoology) Program Specific Outcome <ul style="list-style-type: none"> • Students will be able to conduct experiments, analyze and interpret data for research in the field Zoology. • The Students can pursue higher studies like M.Phil., Ph.D. 	

- The students can get job in varied areas like Conservationist/Govt. Jobs/ Wildlife/Museum like the Natural history, Forester, Ranger, DFO etc./ Genetist/ Molecular Biologists/ NGO/ Entrepreneur (Ornithologist/ Fisheries/ Pathologist/ Herpetologist/ Sericulture/ Endocrinologist/ Serology Environmentalist etc)
- There are ample opportunities in field of Academic.

COURSE OUTCOMES

SEMESTER-I

Paper I Biosystematics, Taxonomy & Evolution	<p>The objective of the course is to impart knowledge about Taxonomic status of animal and evolutionary trends.</p> <ul style="list-style-type: none"> ➤ Students will be able to identify the systematic position of animals so that they can know the hierarchy of animals. ➤ They will be able to evaluate the bio-diversity indices.
Paper II Structure & function of Invertebrate	<p>The objective of the course is to make the students aware of different structure, function and developmental stage of invertebrates .</p> <ul style="list-style-type: none"> ➤ Students will be able to compile different vital systems in different phyla of invertebrates. ➤ Students will be able to discuss the evolutionary significance of invertebrate larval forms.
Paper III Quantitative Biology, Biodiversity and Wildlife.	<p>The objective of the course is to equip the students with tool & technique Biostatistics, its application in the field of Biodiversity and Wildlife.</p> <ul style="list-style-type: none"> ➤ Students will be able to analyze the statistical data of wildlife and biodiversity. ➤ Students will be able to identify various wild medicinal plant species. ➤ Students will know the wildlife protection acts and its amendments, their area of work, committees and legal framework, in-situ conservation strategies.
Paper IV Bimolecular and structural Biology	<p>The objective of the course is to inculcate the knowledge about chemical foundation of biology.</p> <ul style="list-style-type: none"> ➤ Students will be able to explain the basic concept of structure & metabolism. ➤ Students will come to know the latest development in this field like Nano particles and biomaterials. ➤ Students will be able to explain the Nucleic Acid Synthesis.

SEMESTER-II

Paper I General and comparative animal physiology & endocrinology	<p>The objective of the course is to co relate the physiological process of animals and relationship of organ system.</p> <ul style="list-style-type: none"> ➤ Students will know about behavioral pattern due to pheromones and related chemicals as means of communication among vertebrates. ➤ They will be able to compare the physiology of different system from lower to higher vertebrates. ➤ Students will able to know the thermoregulatory process in different animals and related behaviors.
Paper II	<p>The objective of the course is to aware students about population and population</p>

Population Ecology and environmental Physiology	<p>dynamics, meditation, Yoga and physiological response to body exercise.</p> <ul style="list-style-type: none"> ➤ Students will understand about population dynamics, life history pattern, fertility rate and age structure. ➤ Students will be able to explain predator prey relationship, mutualism ,ecological niche, conservation management of natural resources, sustainable development and general idea about biohazards.
Paper III Tools and Techniques in Biology	<p>The objective of the courses is to equip the students with the use of latest tools and their techniques used in biological system.</p> <ul style="list-style-type: none"> ➤ Students can utilize computer aided techniques for data presentation data analysis and statistics. ➤ Students will use the methods separation techniques of biochemical materials and also about original separation. ➤ Students can prepare experiments related to immunological techniques such as immune diffusion and immunes electrophoresis, Histo-pathological techniques, molecular cytological and molecular biological techniques.
Paper IV Molecular cell biology & Genetics	<p>The objective of the course is to make the students aware of bio-membrane, cell-cell signaling, sex determination.</p> <ul style="list-style-type: none"> ➤ Students will understand about the bio-membrane, transport across cell membrane, cell movements, cell surface receptors of signaling molecule. ➤ Students will learn about cell-cell adhesion and communication and elementary idea of human genome project. ➤ Students will get the general idea of genetic diseases, human gene therapy, prenatal diagnosis and counseling, gene library, transgenic and knockout animals and their applications.
SEMESTER-III	
Paper I Comparative anatomy of Vertebrates	<p>At the end of this course students will be able to:-</p> <ul style="list-style-type: none"> ➤ Describe different systems of Chordate ➤ Compare different systems from fish to mammals. ➤ Explain adaptations in Vertebrate ➤ Explain evolutionary significance in early vertebrate.
Paper II Limnology	<p>After completing this course, students will be able to:-</p> <ul style="list-style-type: none"> ➤ Know about freshwater habitat and their ecosystem ➤ Will be able to discuss physico-chemical parameters of freshwater habitat ➤ Prepare an account of Limnological biota. ➤ Analyze the pollutants in aquatic resources, can design the strategies for management and conservation of aquatic resources.
Paper III Eco-toxicology	<p>Students who complete this course will be able to :-</p> <ul style="list-style-type: none"> ➤ Compare different ecosystems ➤ Utilize basic concepts and applications of Remote Sensing Techniques in environmental conservation. ➤ Can discuss about radio-active compounds and their impact on the

	<p>environment.</p> <ul style="list-style-type: none"> ➤ Can discuss about radio-active compounds and their impact on the environment. ➤ Analyze the public health hazards occur due to environmental disaster.
Paper – IV Aquaculture	<p>At the end of this course students will be able to:-</p> <ul style="list-style-type: none"> ➤ Explain fishery resources of M.P. and India and its culture practices. ➤ Demonstrate fresh water fish farm engineering. ➤ Can apply the knowledge of fisheries management and extension, as well as entrepreneurship in the field of fish marketing.
SEMESTER-IV	
Paper I Animal Behavior and Neurophysiology	<p>Students who complete this course will be able to :-</p> <ul style="list-style-type: none"> ➤ Evaluate different methods of behavioural patterns of animals and analysis of ethogram. ➤ Discuss neural and hormonal control of behaviour and communication, evolution of language in primates. ➤ Can demonstrate practical aspects of biological rhythms, learning and reasoning.
Paper II Gamete biology, Development and differentiation in Vertebrate	<p>Students after completing this course will be able to :-</p> <ul style="list-style-type: none"> ➤ Explain comparative account of gonads in mammals, in vitro technique and sex determination. ➤ Discuss the hormonal regulation, endocrinology and physiology of placenta. ➤ Explain stem cell disorders, cell diversification.
Paper III Wild life Conversation	<p>At the end of this course, students will be able to:-</p> <ul style="list-style-type: none"> ➤ Analyze the habitat, evaluate and manage wildlife. ➤ Use the knowledge for preservation of general genetic diversity. ➤ Can evaluate the population estimation of wild animals by different methods. ➤ Can revise the wildlife legislation to amendments & implementations. ➤ Can assess the protected areas for wildlife development.
Paper – IV Environment & Biodiversity conservation	<p>At the end of this course, students will be able to:-</p> <ul style="list-style-type: none"> ➤ Apply knowledge for environmental and sustainable development ➤ Monitor and assess the impact of biodiversity conservation ➤ Analyze agricultural pollution and management of solid-waste. ➤ Discuss about global warming and disaster management. ➤ Identify the causes of biodiversity crises.