



# Govt. Gundadhur PG College, Kondagaon

## Distt.- Kondagaon (Chhattisgarh)



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### Course Outcomes: M.A. in Economics

| Semester – I                 |   |
|------------------------------|---|
| Course Name                  | Course Outcome  |
| Micro Economic Analysis- I   | On successful completion of the course a student will be able to developed microeconomic concepts of advanced theoretical understanding of consumer behavior and decision making.   |
| Macro Economic Analysis- II  | Developed to understanding of the interrelationships among the various macroeconomic variables and working of the economy as a whole. Gain in depth knowledge about Keynesian view of consumption, investment and post Keynesian approaches   |
| Quantitative Methods         | Students will learn to estimate knowledge gained about statistical concept like as Skewness, Regression Analysis, Index Number, Time Series Analysis etc. Mathematical concepts gain helped to find out real valued.  |
| Indian Economy               | Knowledge gained about the GDP, National Income, Agricultural growth, industrial development and policies of Indian economy. On successful completion of the course a student will be able to making a able decision of various issues on Indian economy.   |
| Industrial Economics         | Successfully completion of the course Knowledge gained about will be economics of scale, growth of firm size, industrial policies of India. How to make a regional industrial growth in India.  |
| Semester – II                |   |
| Micro Economic Analysis - II | Developed to understanding of the Course knowledge gain about critical evaluation of marginal analysis, Bamoul, Williamson and Morris model, partial general equilibrium, linear programming, game theory etc. and students will developed an understanding of how made under asymmetric information conditions and how the sub-optimality problem can be addressed in economics. |
| Macro Economic Analysis- II  | Successfully completion of the course Knowledge gained about will be students are Inflation, Business Cycle, Monetary Policy, Fiscal Policy etc. and strengthening the student's knowledge on open economy.   |

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| Research Methods and Computer Application | This course introduces students to basics knowledge gain about research methodology, hypothesis, objective, data collection like as primary and secondary data, classification on tabulation and collection of data analysis using their software skills. The course has made of increase theoretical and quantitative skills of students.  |
| Indian Economic Policy                    | Students will have capability to understand government policies, LPG, problem of poverty and inequality, fiscal federalism, center state financial relation, balance of payment, foreign exchange etc. The course has made of increase knowledge in various issues of Indian economy.   |
| Labor Economics                           | Successfully completion of the course and Knowledge gained about will be students are labor market, wage determination, productivity and wage relationship, labor legislation in India etc. Future reference student are more effectively leadership in labor sector.   |
| <b>Semester – III</b>                     |   |
| Economics of Growth                       | This course teaches the student various aspects of knowledge gained about the economic growth and development, vicious circle of poverty, PQLI, HDI, Cost-Benefit analysis and more growth model study like as Marks, Schumpeter, Harrod-Domar, Kaldor, Robinson, Solow etc.  |
| International Trade                       | This course students learn about the inter regional and international trade classical trade models in money terms, classical trade model for multiple goods and multiple. Besides theory they also learn about the relevance of Ricardo's model, Heckscher Ohlin theorem, tariffs, quotas, BOP etc.   |
| Public Finance                            | The course aims to introduce students to the empirical concepts in public economics, government intervention for, taxes, public expenditure, public debt and budget. This course teaches the student main issues in government revenues and expenditure.  |
| Environmental Economics                   | The course aims to students to introduce the main theoretical and empirical concepts in environmental economics. Environmental policy, theories of externalities, relation between environmental economics and economics, international environmental agreements etc. Students with understanding by the main issues in environmental valued and with the basic features of the environmental policy. |
| Demography                                | Students will have capability to understand with this course, theory of demography, migration, mortality, fertility, GRR, NRR etc. which have to course student helped of various study of population report.   |

| <b>Semester – IV</b>                  |  |
|---------------------------------------|--|
| Economics of Development and Planning | Successfully completion of the course and Knowledge gained about will be students are Understanding the concepts of economic planning, Big Push Theory, Critical minimum effort, balanced and unbalanced growth, role of fiscal and monetary policy in economic development.   |
| International Economics               | This course completion of the students Knowledge gained about will be economic co-operation reforms, SAARC, SAPTA, ASEAN, NAFTA, UNCTAD, WTO, TRIPS, TRIMS, MNCs in India, basic knowledge to understand the balance of payment with the changes of money supply.  |
| Public Economics                      | Develops an understanding of this course students are various aspects of public economics in Fiscal Federalism in India, vertical and horizontal imbalances, federal finance, center state financial relation, budget analysis of center and Chhattisgarh govt.  |
| Economics of Social Sector            | The concept an understanding of this course students are classification of resource, renewable resources, classification of population, control of population, environmental protection, environmental laws, sustainable development, expenditure on education, determination of healthcare. Whatever all the social issues that are related to the economics studied it.  |
| Viva - Voce                           | In our college M.A.in Economics studied at semester wise and which is total number of four semesters. Teachers are advice to the all students for Viva- Voce course, all paper studied at basic concept. Teachers spend an everyday 2-3 hours with students for viva-voce which is concept an understanding of this course. This course is students developed own capacity building and gain in over all confidence level. |

**Course Outcomes: B.A. Economics**

| <b>B.A. Part I</b> |   |
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| Micro Economics    | The concept an understanding of this course perspective of individual decision making as consumers and producers. The students are learn basic principles demand and supply. Various forms of market like as perfect competition and imperfect competition. The course learn students are basic elements of consumer and production theory. |
| Indian Economy     | This course introduces to the students understand the various key issues related to the Indian economy. The course also will be knowledge gain various sectors like as agriculture, industry and external. Students will have capability to government policies and economic decision making.   |

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| <b>B.A. Part II</b>                     |   |
| Macro Economics and International Trade | <p>This course will be helped of students are broad conceptual frameworks which is National income, consumption function, nature and characteristics of trade cycle.</p> <p>The course International Trade introduces to the students main theoretical concepts in international trade. Comparative advantage theory, opportunity cost theory, Heckscher Ohlin theory, understand concept the Tariff, Balance of trade and Balance of Payment. At the end of course, the students should be able to understanding of economic concepts of the trade theory.</p> |
| Money, Banking and Public Finance       | <p>This course introduces to the students basic concept of money, value of money, inflation, deflation.</p> <p>The aims to introduce students to the main concepts in Banking, like as commercial banks and Reserve Bank of India. Introduce to function of both banks.</p> <p>The basic concept to introduce to student in public finance empirical of government revenue and expenditure. Analysis to the public debt and public budget.</p>  |
| <b>B.A. Part III</b>                    |   |
| Development and Environmental Economics | <p>This course aims to developed to students basics concept of development economics discussions of the concepts of development, growth, poverty and various growth model.</p> <p>This course teaches the student various aspects of environmental issues like as environmental disruption as an allocation, problems of environmental damages land, water, forest, air. Introduce to sustainable development and environmental accounting.</p>   |
| Statistical Methods                     | <p>This course will have help of basic concept definition, importance and limitation of statistics. Introduce to measuring of central tendency mean, median and mode. Analysis to standard deviation, mean deviation, range, quartile deviation. Introduce to analysis of correlation, index number and time series.</p>  |

# Department of Sociology

## Course Outcomes: M.A. in Sociology

| Semester – I  |   |
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| Course Name   | Course Outcome  |
| Classical Sociological Tradition                                | Students would be able to understand fundamental concepts of the sociology and the contribution of classical sociologists. This course would be helpful to provide foundational ideas of sociology. This course also helps to provide the theoretical as well as methodological inputs to the learners. This course enriches the sociological knowledge of the students.  |
| Philosophical and Conceptual Foundation of Research Methodology | The knowledge on research fundamentals and dimensions are very much essential to conduct a study. The thematic review helps in transferring the knowledge, so the paper aims in bringing out research fundamentals and dimensions in a simple and understandable way. The paper has been based on the literature review, review of books, journals and author view. The research fundamentals, research paradigm have been explained with suitable case and with an example. In conclusion, the comprehensive reviews of research methods provide a glance to researchers to build up a conceptual foundation in the research process.  |
| Social change in India  | The concept of social change is a very broad one. It consists of a constellation of processes of change in human society in terms of place, time and context. Since it is so broad, it is bound to be somewhat imprecise, tentative and value-neutral.<br>We will analyse the processes and patterns of social change and mobility in Indian society. Special attention will be paid to the views of Mahatma Gandhi and to his efforts to bring about a non-violent social revolution in Indian society. Gunnar Myrdal's rationalist approach to the understanding of socio-economic development will also be discussed.  |
| Rural Sociology   | The course explores substantive issues in Rural Sociology. It gives attention to Indian themes. Studying the course students will be able to <ul style="list-style-type: none"> <li>• Define Rural Sociology and demonstrate nature, subject-matter and importance of studying Rural Sociology.</li> <li>• Understand and analyze social, economic and political aspects of rural society.</li> <li>• Demonstrate how caste system operates and its importance in rural society.</li> <li>• Define and demonstrate democratic decentralization of power and importance of Panchayati Raj Institution in bringing about changes in rural society.</li> <li>• Understand the changes that are taking place in rural society with reference to agrarian reforms and rural development</li> </ul> |

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| Practical-I                                 | <p>An interview guide is simply a list of the high level topics that you plan on covering in the interview with the high level questions that you want to answer under each topic. ... You may also decide partway through that an entire line of questioning isn't appropriate for a particular interviewee.</p> <p>a case study can be defined as an intensive study about a person, a group of people or a unit, which is aimed to generalize over several units'.1 A case study has also been described as an intensive, systematic investigation of a single individual, group, community or some other unit in which the researcher examines in ...</p> |
| <b>Semester – II</b>                        |   |
| Classical Sociological Thinkers             | The work of such classical sociological theorists as Auguste Comte, Karl Marx, Herbert Spencer, Emile Durkheim, Max Weber, Georg Simmel, and Vilfredo Pareto was important in its time and played a central role in the subsequent development of sociology.  |
| Quantitive Research Techniques in Sociology | Quantitative methods include measurement by sample surveys, statistical modeling, social networks, and demography. Qualitative methods include interviews, focus groups, observation, and textual analysis.   |
| Sociology of Development                    | Sociology of development is likewise a branch of sociology. It studies the interface of socio-cultural circumstances and the processes of development. This discipline presumes that every aspect of development largely depends on sociological conditions of society for its realization.   |
| Indian Rural Society                        | This course would help to reflect upon the structure, nature of the rural society which helps learners to understand the contemporary issues of rural society. This course would provide insights and perspectives to the learners to address the issues, problems and challenges of rural social structure. This course also offers opportunities of employments in the NGOs those are working in the rural set up. Otherwise, learners also go for establishing Non-Governmental Organizations for the rural development.   |
| Practical- II                               | Questionnaires have advantages over some other types of <u>surveys</u> in that they are cheap, do not require as much effort from the questioner as verbal or telephone surveys, and often have standardized answers that make it simple to compile data. However, such standardized answers may frustrate users as the possible answers may not accurately represent their desired responses. Questionnaires are also sharply limited by the fact that respondents must be able to read the questions and respond to them. Thus, for some <u>demographic groups</u> conducting a survey by questionnaire may not be concretely feasible.                     |
| <b>Semester – III</b>                       |   |
| Classical Sociological Theories             | After studying this course, student would be able to understand the basic nature of the sociological theories. This course provides students to the basic and   |

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|  | <p>conceptual knowledge about the basic concepts and sociological theories. This is fundamental and very basic theoretical roots of sociological theories that enhance the knowledge of the learners. This course would provide the very fundamental insights to the learners which further support to understand the modern and postmodern sociological theories. Thus, this course has very significance and relevance.</p>  |
| <p>Social movements in india</p>               | <p>Social movements have played a vital role in Indian politics since well before the inception of India as a new nation in 1947. During the Nehruvian era, from Independence to Nehru's death in 1964, poverty alleviation was a foundational standard against which policy proposals and political claims were measured; at this time, movement activism was directly accountable to this state discourse. However, the role of social movements in India has shifted during the last several decades to accompany a changed political focus—from state to market and from reigning ideologies of secularism to credos of religious nationalism. In the first volume to focus on poverty and class in its analysis of social movements, a group of leading India scholars shows how social movements have had to change because poverty reduction no longer serves its earlier role as a political template. Nonetheless, particular sectors of social movement politics remain the holding vessels for India's egalitarian conscience. With distinctive chapters on gender, lower castes, environment, the Hindu Right, labor, farmers, and biotechnology, <i>Social Movements in India</i> will be attractive to students and researchers in many different disciplines.</p> |
| <p>Perspectives of Study to Indian Society</p> | <p>Though sociology does not have a long history but it does have a long past. Sociological research in India started long before the arrival of formal sociology by British administrators. The lack of a proper grasp and appreciation of Indian social realities, the inadequate, and often inaccurate, understanding of local customs and traditions, and misinterpretations about different institutional arrangements led the colonial administrators to make use of sociology and social anthropology to smoothly run the colonial administration.</p> <p>A vast difference could be seen between the Western and Indian intellectual development. 'Religion' had a great impact on the mind-set of western and modern intellectuals, whereas in India, the thinkers paid more emphasis on 'secularism'. Although, at the same time Indian sociologists were positively influenced by the Western traditions of the philosophy of rationalism, positivism, and historical materialism. Moreover, the pioneers of Indian sociology drew their value premises and perspective on studying Indian society from the nationalist reformation leadership of the nineteenth century.</p>   |
| <p>Industry and Society in India-I</p>         | <p>In sociology, industrial society is a society driven by the use of technology and machinery to enable mass production, supporting a large population with a high capacity for division of labour. Such a structure developed in the Western world in the period of time following the Industrial Revolution, and replaced the agrarian societies of the pre-modern, pre-industrial age.</p>   |

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|                                   | Industrial societies are generally mass societies, and may be succeeded by an information society. They are often contrasted with traditional societies   |
| Criminology-I                     | The interests of criminologists include the study of nature of crime and criminals, origins of criminal law, etiology of crime, social reaction to crime, and the functioning of law enforcement agencies and the penal institutions. It can be broadly said that criminology directs its inquiries along three lines: first, it investigates the nature of criminal law and its administration and conditions under which it develops; second, it analyzes the causation of crime and the personality of criminals; and third, it studies the control of crime and the rehabilitation of offenders. Thus, criminology includes within its scope the activities of legislative bodies, law-enforcement agencies, judicial institutions, correctional institutions and educational, private and public social agencies.  |
| <b>Semester – IV</b>              |   |
| Modern Sociological Theories      | The aim of this course is to give an overview of modern sociological theory and a deeper understanding of some modern sociological perspectives. With "modern sociological theory" is understood the period after the decline of functionalism around 1960 and until today.<br>To the most prominent theoretical sociologists in the latter half of the 20th century belong Pierre Bourdieu, Michel Foucault, Anthony Giddens, Erving Goffman and Jürgen Habermas.<br>The list is made up of male sociologists and reflects the male dominance we have seen in sociology until recently. Among the more significant developments in modern sociological theory has been the rise of feminist perspectives to challenge this male dominance. Other important fields and perspectives in recent sociology are cultural theory, rational choice and structural analysis. |
| Comparative Sociology             | Comparative sociology involves comparison of the social processes between <u>nation states</u> , or across different types of society.<br>(for example <u>capitalist</u> and <u>socialist</u> . There are two main approaches to comparative sociology: some seek similarity across different countries and cultures whereas others seek variance. For example, <u>structural Marxists</u> have attempted to use comparative methods to discover the general processes that underlie apparently different social orderings in different societies. The danger of this approach is that the different social contexts are overlooked in the search for supposed universal structures   |
| Industry and Society in Indian-II | <u>Industrial</u> societies use external energy sources, such as <u>fossil fuels</u> , to increase the rate and scale of production. <sup>[2]</sup> The production of food is shifted to large commercial farms where the products of industry, such as <u>combine harvesters</u> and fossil fuel-based <u>fertilizers</u> , are used to decrease required human labor  |



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|                | while increasing production. No longer needed for the production of food, excess labor is moved into these <u>factories</u> where <u>mechanization</u> is utilized to further increase efficiency. As populations grow, and <u>mechanization</u> is further refined, often to the level of <u>automation</u> , many workers shift to expanding <u>service industries</u> .   |
| Criminology-II | Criminology II builds further on the basic criminological competence acquired in connection with Criminology I. The course provides both a broader and more in-depth knowledge of a number of areas of criminology, as well as focusing on a range of theories and research methodologies.   |
| Project Report | <p>The course is an introductory course on how research is actually done. With emphasis on formulating research design, methods of data collection, and data analysis, it will provide students with some elementary knowledge on how to conduct both, quantitative and qualitative research. Field work is an applied part of social research methods. This paper aims to acquaint students with empirical field data collection, analysis and writing analytical and standard dissertation or research report in sociology. From the course students will able to learn about</p> <ul style="list-style-type: none"> <li>• Meaning, scope, types and significance of Social Research.</li> <li>• Importance of research design in Social Research and how to formulate it.</li> </ul> <p>How to collect, analyze data and how to write a field report.</p> |

### Course Outcomes: B.A. SOCIOLOGY

| <b>B.A. Part I</b>          |  |
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| Introduction to Sociology   | <p>The course is intended to introduce the students to a sociological way of thinking. It provides an understanding of the discipline of Sociology and sociological perspective. It also provides foundation for other more detailed and specialized courses in sociology. Students will be able to:</p> <ul style="list-style-type: none"> <li>• Define Sociology and demonstrate nature, scope and subject-matter of Sociology.</li> <li>• Demonstrate how Sociology differ from and similar to other social sciences and their areas of interdependence.</li> <li>• Acquaint themselves with the basic concepts of Sociology like society, community, association, culture, social change, social stratification etc.</li> <li>• Know the basic social institutions like family, marriage, kinship in a scientific way.</li> <li>• Understand and demonstrate how self develops through various process of interaction. Demonstrate how societal and structural factors influence individual behaviour.</li> <li>• Explain social change and the factors affecting social change. Realize the importance of cultural lag to understand social change</li> </ul> |
| Contemporary Indian Society | <p>The second volume of the book deals with understanding the nature of contemporary Indian society. In this section, first of all, the traditional or classical nature of Indian society has been clarified. It then highlights the</p>   |

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|                                     | <p>nature of the various classes and institutions related to the structure and composition of Indian society. In this section related to the second paper of the course, the sociological analysis of the nature of many family and social problems has been done, which are great challenges before the contemporary Indian society. The course creators are to be congratulated for including major contemporary problems like Surrogate Motherhood and Live-in-Relationship in the curriculum. These are the problems of the present era, which have so far received the attention of very few sociologists. In order to clarify the nature of these problems, apart from taking the help of many family counselors, it was possible to make a factual analysis of these issues only after taking information about the primary facts from some people related to these problems.</p> |
| <p><b>B.A. Part II</b></p>          |  |
| Sociology Of Tribal Society         | <p>Students would be able to understand the issues and problems of tribal communities in India. Students will be also benefited to get job opportunities in the field of tribal development and NGO sectors those are working in the areas of tribal societies for the cause of tribal development. This course provides knowledge about the socio-economical status of the tribal societies in India. This course also provides information about the contemporary issues of the tribal societies.</p>  |
| Crime and Society                   | <p>The second volume of the book 'Crime Aur Samaj' is a simple attempt to explain the evolving perspectives about crime from time to time. In this section, along with clarifying the initial explanations of crime up to the present point of view, various forms of crime have been clarified in such a way that the new patterns of crime in India can be easily understood. Apart from this, some social problems were also highlighted which encourage delinquent behavior in one way or the other. Discussion of modern corrective systems related to crime and the role of police and court in the field of crime has also been clarified in the context of present facts. ,</p>  |
| <p><b>B.A. Part III</b></p>         |  |
| Foundations of Sociological Thought | <p>The subject material etc. has been presented unit time according to the syllabus. In the second part of the book, the sociological concepts and theories propounded by the pioneers of sociology and great sociological thinkers August Comte, Emile Durkheim, Herbert Spencer, Karl Marx, Max Weber, Vilfredo Pareto and Indian social thinkers like Mahatma Gandhi and Dr. The unit is clearly explained by presenting the bar. According to the new syllabus, complete study material has been included in the book.</p>   |
| Methods of Social Research          | <p>The course is an introductory course on how research is actually done. With emphasis on formulating research design, methods of data collection, and data analysis, it will provide students with some elementary knowledge on how to conduct both, quantitative and qualitative research. Field work is an applied part of social research methods. This paper aims to acquaint students with empirical field data collection, analysis and writing analytical and standard dissertation or</p>  |

research report in sociology. From the course students will able to learn about

- Meaning, scope, types and significance of Social Research.
- Importance of research design in Social Research and how to formulate it.

# DEPARTMENT – POLITICAL SCIENCE

## COURSE OUTCOME

### B.A I FIRST YEAR

After completion of the course students will learn following things:---

- Co.1 Students can evaluate and analyze politics as a specific human behavior and method of study to political science.
- CO.2 Various theories of origin of state and its essential elements can be definite beneficial and progressive for new generation of learners.
- CO.3 Direct democracy sovereignty and plural city are the essence of preamble as well to the constitution as a whole making it single effective elements in helping build the make up of young india.
- CO.4 Critically evaluating the Indian party system --- its development and looking at the ideology of dominant national parties.
- CO.5 Tracing the evolution of Indian political thought from ancient India to modern india.

### B.A II SECOND YEAR

- CO.1 Distribution between tribe and caste can be made easier and under stable taking an insight on civil society.
- CO.2 Various tribal movements have ingrained self movement and contribution on political society.
- CO.3 Differentiating between tribal community artisans and agriculture has interrelationship in nature which has rural background.
- CO.4 Understanding tribal community will help sensitize community with special reform to particularly vulnerable tribal group.
- CO.5 Tribal movement caused and built social consciousness among different tribal group.

### B.A III THIRD YEAR

- CO.1 Approach to the study of international politics and explaining role of diplomacy, propaganda and military capabilities in making of foreign policy.
- CO.2 Diverse theories of international politics and explaining basic concepts like globalization in contemporary world order.
- CO.3 Students can inculcate and narrate basic principles, evolution and bilateral relations.
- CO.4 Concept of balance of power and collective security have progressive understanding on this subject and form the system of government levels.
- CO.5 Environmentalism, globalization and concept of human rights are modern concepts and political as well as social phenomena that can be studied under contemporary perspective

## **M.A FIRST SEMESTER**

CO.1 Introducing the Indian constitution with focus on role of constituent assembly and examining the essence of the preamble.

CO.2 Providing insight into dominant features of ancient western political thought :focus on Aristotle, Plato, Hobbes, John Locke with emphasis on emergence of Roman law.

CO.3 Examining and studying comparative politics and diverse political system : liberal –democratic , authoritarian, socialist forms of political system and analyzing its approaches.

CO.4 Evaluating the working of UN and its organ , peace keeping function and human rights and its relevance after cold war era.

## **M.A SECOND SEMESTER**

CO.1 Approaches and methods to study the discipline through political realism, pluralism, and world's system model.

CO.2 Investigating , evaluating the electoral process in India with focus on election commission its functions, composition and role.

CO.3 Analyzing the various dimensions of the working of supreme court jurisdiction , its review and activism in context of procedure, ruling and correction.

CO.4 Examining the fundamental rights and duties of Indian citizens with study of significance and status of directive principles.

## **M.A THIRD SEMESTER**

CO.1 Analyzing what is politics and explaining the approaches to the study of political science— Normative, behavioral, post- behavioral , feminist.

CO.2 Explaining the nature, scope, evolution of public administration , private and public administration concept and challenges in public administration.

CO.3 Conducting comparative study of executive, legislative, and judiciary and critically looking at rights of its citizens.

CO.4 Understanding research work and its research methodology under scientific method.

## **M.A FOURTH SEMESTER**

CO.1 Approaches and methods to study the discipline through issues of under development , terrorism, regionalism in international politics.

CO.2 Ecological approach to public administration and its method of implementation.

CO.3 Explaining the planning and planned administration in India. Continuity and changes in Indian administration.

CO.4 Explaining the determinants of Indian foreign policy as well as assessing and examining its scope on futuristic well being of our citizen.

# Department of Hindi

## Course Outcomes : M.A. Hindi Each Semester

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| M.A.<br>Hindi   | M.A. Hindi<br>- 1<br>Semester | C.O.1 – छात्रों को आदिकालीन एवं पूर्व मध्यकालीन साहित्य के विभिन्न रूपों प्रवृत्तियों, रचनाओं और रचनाकारों का परिचय प्राप्त होगा।           |
|   |                               | C.O.2 – छात्रों में प्राचीन एवं मध्यकालीन काव्य के अंतर्गत चंदबरदाई, कबीर एवं जायसी की रचनाओं के प्रति समीक्षात्मक दृष्टिकोण का विकास होगा। |
|   |                               | C.O.3 – छात्र प्राचीन एवं मध्ययुगीन काव्यभाषा से परिचित होंगे।  |
|   |                               | C.O.4 – छात्र छायावादी एवं समकालीन जीवन दर्शन से परिचित होंगे।  |
|   |                               | C.O.5 – छात्रों को आधुनिक हिन्दी काव्य की प्रवृत्तियों का परिचय प्राप्त होगा।   |
|   |                               | C.O.6 – छात्रों को गद्य विधाओं के विकासक्रम की जानकारी प्राप्त होगी।  |
|   | M.A. Hindi<br>- 2<br>Semester | C.O.1 – छात्रों को उत्तर मध्यकालीन एवं आधुनिककालीन साहित्य के विभिन्न रूपों, प्रवृत्तियों, रचनाओं और रचनाकारों का परिचय प्राप्त होगा।       |
|   |                               | C.O.2 – छात्रों में सूरदास, तुलसीदास एवं बिहारी के काव्य की समीक्षात्मक दृष्टिकोण में अभिवृद्धि होगी।                                       |
|   |                               | C.O.3 – छात्रों को केशव, भूषण, पदमाकर, देव, घनानंद के काव्य प्रवृत्तियों का ज्ञान होगा।   |
|   |                               | C.O.4 – छात्रों को प्रयोगवादी एवं प्रगतिवादी काव्य की प्रवृत्तियों का ज्ञान होगा।   |
|   |                               | C.O.5 – छात्रों में काव्य के आस्वादन, अध्ययन और मूल्यांकन की दृष्टि का विकास होगा।  |
|   |                               | C.O.6 – छात्रों को आधुनिक काल के काव्य प्रकारों एवं उनके तात्त्विक स्वरूप का ज्ञान होगा।  |
|   |                               | C.O.7 – छात्र उपन्यास, निबंध और कहानी विधा के स्वरूप व शिल्पविधि से परिचित होंगे।   |
|   | M.A. Hindi<br>- 3<br>Semester | C.O.1 – छात्र भारतीय काव्यशास्त्र से परिचित होंगे।  |
|   |                               | C.O.2 – छात्रों को पाश्चात्य काव्यशास्त्र के विकासक्रम का ज्ञान होगा।   |
|   |                               | C.O.3 – छात्रों को भाषा विज्ञान के स्वरूप, अंग और शाखाओं का ज्ञान प्राप्त होगा।   |
|   |                               | C.O.4 – छात्रों में भाषा के प्रयोग के संबंध में समुचित दृष्टिकोण का विकास होगा।   |
|   |                               | C.O.5 – छात्र कामकाजी हिन्दी और पत्रकारिता के विभिन्न स्वरूप एवं विकास से परिचित होंगे।   |
| C.O.6 – छात्र पारिभाषिक शब्दावली एवं हिन्दी में कम्प्यूटर के अनुप्रयोग से परिचित होंगे।       |                               |   |
| C.O.7 – छात्रों को भारतीय साहित्य के स्वरूप एवं उनमें अभिव्यक्त भारतीय मूल्यों का ज्ञान होगा। |                               |   |
| M.A.<br>Hindi   | M.A. Hindi<br>- 4<br>Semester | C.O.1 – छात्रों को हिन्दी आलोचना एवं समीक्षाशास्त्र का ज्ञान होगा।  |
|   |                               | C.O.2 – छात्र हिन्दी कवि एवं आचार्यों के काव्यशास्त्रीय चिंतन से परिचित होंगे।  |
|   |                               | C.O.3 – छात्रों में व्यावहारिक समीक्षा का ज्ञान होगा।   |
|   |                               | C.O.4 – छात्रों को हिन्दी भाषा की ऐतिहासिक पृष्ठभूमि व भौगोलिक विस्तार का ज्ञान होगा।   |
|   |                               | C.O.5 दृ छात्रों को मीडिया लेखन एवं अनुवाद के सिद्धांत व व्यवहार का ज्ञान होगा।   |
|   |                               | C.O.6 – छात्र लोक साहित्य के स्वरूप एवं महत्व से परिचित होंगे।  |
|   |                               | C.O.7 – छात्रों को छत्तीसगढ़ साहित्य की विभिन्न विधाओं का ज्ञान होगा।   |

## Couse Outcomes :. Subject Hindi

| Department  | Course   | After Completion of these courses students should be able to:                                       |
|---|--|---|
| Hindi   | FC-Hindi Language<br>B.A.1 <sup>st</sup> Year/<br>B.Sc 1 <sup>st</sup> Year/<br>B.Com 1 <sup>st</sup> Year   | C.O.1 – छात्रों को हिन्दी भाषा के रचनात्मक पहलुओं का ज्ञान होगा।                                    |
|   |  | C.O.2 – छात्रों को शुद्ध हिन्दी वर्तनी एवं मानक हिन्दी भाषा के प्रयोग का ज्ञान होगा।                |
|   |  | C.O.3 – छात्रों को देवनागरी लिपि के लिपि के विकास एवं मानकीकरण का ज्ञान होगा।                       |
|   |  | C.O.4 – छात्र कम्प्यूटर में हिन्दी के अनुप्रयोग से परिचित होंगे।                                    |
|   |  | C.O.5 – छात्रों को संक्षेपण, पल्लवन, पत्राचार, अनुवाद एवं परिभाषिक शब्दावली का ज्ञान होगा।          |
|   | FC-Hindi Language<br>B.A.2 <sup>nd</sup> Year/<br>B.Sc 2 <sup>nd</sup> Year/<br>B.Com 2 <sup>nd</sup> Year   | C.O.1 – छात्रों को हिन्दी के प्रतिनिधि निबंधकारों के निबंधों का परिचय प्राप्त होगा।                 |
|   |  | C.O.2 – छात्र कार्यालयीन भाषा, मीडिया की भाषा, वित्त व वाणिज्य की भाषा, मशीनी भाषा से परिचित होंगे। |
|   |  | C.O.3 – छात्र हिन्दी भाषा और उसके विविध रूपों से परिचित होंगे।                                      |
|   |  | C.O.4 – छात्र अनुवाद की प्रक्रिया के सैद्धांतिक एवं व्यावहारिक स्वरूपों से परिचित होंगे।            |
|   |  | C.O.5 – छात्र हिन्दी की व्याकरणिक कोटियों से परिचित होंगे।  |
|   | FC-Hindi Language<br>/B.A.3 <sup>rd</sup> Year/<br>B.Sc 3 <sup>rd</sup> Year/<br>B.Com 3 <sup>rd</sup> Year/ | C.O.1 – छात्रों में हिन्दी साहित्य एवं रचनाकारों के प्रतिरुचि का निर्माण होगा।                      |
|   |  | C.O.2 – छात्र कथन की विभिन्न शैलियों से परिचित होंगे।   |
|   |  | C.O.3 – छात्र वाक्य की विभिन्न संरचनाओं से परिचित होंगे।  |
|   |  | C.O.4 – छात्रों को हिन्दी के कार्यालयीन एवं व्यावहारिक पत्रों के स्वरूप का ज्ञान प्राप्त होगा।      |
|   |  | C.O.5 – छात्रों को अनुवाद प्रक्रिया का ज्ञान प्राप्त होगा।  |
| C.O.6 – छात्र घटनाओं, विभिन्न समारोहों के प्रतिवेदन लेखन से परिचित होंगे। |  |   |
| Hindi Literature<br>B.A. 1 <sup>st</sup> Year                             | C.O.1 – छात्रों को प्राचीन हिन्दी काव्य के विभिन्न स्वरूपों एवं प्रवृत्तियों का ज्ञान होगा।                  |   |
|   | C.O.2 – छात्र कबीर, जायसी, सूर, तुलसी एवं घनानंद के काव्य से परिचित होंगे।                                   |   |
|   | C.O.3 दृ छात्रों में भक्ति एवं संत काव्य की समीक्षात्मक दृष्टिकोण का विकास होगा।                             |   |
|   | C.O.4 – छात्र विद्यापति, रहीम एवं रसखान के साहित्यिक   |   |

|  |   |   |
|--|---|---|
|  |   | प्रवृत्तियों से परिचित होंगे।   |
|  |   | C.O.5 – आधुनिक हिन्दी गद्य की विधाओं से परिचित होंगे।   |
|  |   | C.O.6 – छात्रों में उपन्यास एवं कहानी की तात्विक समीक्षा क्षमता का विकास होगा                   |
|  |   | C.O.7 – छात्रों में हिन्दी कहानी के विविध स्वरूपों के माध्यम से मानवीय संवेदनाओं का विकास होगा। |
|  | Hindi Literature<br>B.A. 2 <sup>nd</sup> Year | C.O.1 – छात्रों में अर्वाचीन हिन्दी काव्य के विकास का ज्ञान होगा।                               |
|  |   | C.O.2 – छात्र छायावादी काव्य में व्यक्त प्रकृति चेतना से परिचित होंगे।                          |
|  |   | C.O.3 दृ छात्र राष्ट्रीय काव्यधारा के कवियों के काव्य से परिचित होंगे।                          |
|  |   | C.O.4 – छात्रों में हिन्दी निबंध एवं एकांकी विधा की तात्विक समीक्षा दृष्टि का विकास होगा।       |
|  |   | C.O.5 – छात्र अंधेर नगरी नाटक के माध्यम तद्युगीन साहित्य एवं भाषा से परिचित होंगे।              |
|  |   | C.O.6 – छात्रों में निबंध, एकांकी और नाटक के आस्वादन की क्षमता का विकास होगा।                   |
|  | Hindi Literature<br>B.A. 3 <sup>rd</sup> Year | C.O.1 – छात्रों को हिन्दी भाषा के विविध बोलियों का परिचय प्राप्त होगा।                          |
|  |   | C.O.2 – छात्र हिन्दी भाषा के स्वरूप व विकास की अवधारणा से परिचित होंगे।                         |
|  |   | C.O.3 – छात्रों को हिन्दी साहित्य के इतिहास का ज्ञान होगा।                                      |
|  |   | C.O.4 – Nk= dkO; ds Lo:i ,oa iz;kstu ls ifjfr gksaxsA   |
|  |   | C.O.5 – छात्रों में हिन्दी शब्द भण्डार के संबंध में विविध शब्दावली का ज्ञान प्राप्त होगा।       |
|  |   | C.O.6 – छात्रों को लोक साहित्य के स्वरूप एवं महत्व का ज्ञान प्राप्त होगा।                       |
|  |   | C.O.7 – छात्र छत्तीसगढ़ी साहित्य के विविध विधाओं से परिचित होंगे।                               |
|  |   | C.O.8 – छात्र छत्तीसगढ़ी साहित्य एवं भाषा के विकासक्रम से परिचित होंगे।                         |



## **Department of English**

### **COURSE OUTCOMES**

#### BA-I [PAPER-I] Literature in English from 1550-1750 AD:

CO1: This course will enable the students to manifest familiarity of the major texts and traditions of English literature.

CO2: this course will enable the students to meditate and understand and become acquainted with the different periods of English literature dominated by significant authors like Shakespeare, Milton, Keats etc.

#### [PAPER-II] Literature in English from 1750-1900 AD:

CO1: this course will enable the students to meditate and understand and become acquainted with representative knowledge and cultural writings within a considerable number of historical and cultural frameworks.

CO2: this course will enable the students to meditate and understand and have a knowledge about the various stages in the development of English literature.

#### BA-II [PAPER-I] Modern English Literature-I:

CO1: This course will introduce to the students to the stalwarts in modern English writings like, Eliot, Yeats, Shaw and will enable them to understand and evolve a critical perspective of literature of this period.

CO2: This course will enable the students to imbibe and appreciate the genres of poetry, prose, drama and fiction in modern English literature.

#### [PAPER-II] Modern English Literature-II:

CO1: This course will introduce to the students to the representative authors of Modern English literature like the world war poets and will enable them to comprehend and evolve critical outcomes of the work of this period.

CO2: This course will empower the students with the knowledge of the characteristics writings in the various genres of modern English literature and will encourage them to appreciate and evaluate it critically.

#### BA-III [PAPER-I] Indian Writing in English:

CO1: This course will acquaint the students with background knowledge of the different stages of development of Indian writing in English and will inspire them to appreciate and evaluate it critically.

CO2: This course will familiarize to the students with the great Indian writers in English like Tagore and R. K. Narayan and will help them understand and critically appreciate the thematic concerns and trends of Indian writing in English.

#### [PAPER-II] American Literature:

CO1: This course will introduce the students with the history of American Literature and help them evolve and critically examined its literary trends, cultural things and main artistic features.

CO2: This course will give the students an insight into the various facts of American society and will encourage them to critically consider the literary texts representing its diverse periods and philosophies.

# Course Outcomes :Home Science

## B.A. 1<sup>st</sup> Year (Home Science)

| Department   | Course  | After completion of these course students                  |
|--------------|---|--|
| Home Science | B.A 1 <sup>st</sup><br>Home Science<br>Antaomy physiology of<br>hygiene | C.O.-1: Structure & functions of cell general introduction |
|              |   | C.O.-2: Circulatory System                                 |
|              |   | C.O.-3: Digestive System                                   |
|              |   | C.O.-4 Nervous System                                      |
|              |   | C.O. -5 Hygien Personal hygiene social ghygiene            |

## B.A. 1<sup>st</sup> Year (Home Science)

| Department   | Course   | After completion of these course students                           |
|--------------|--|---|
| Home Science | B.A 1 <sup>st</sup><br>Home Science<br>Extension Education | C.O.-1: Introduction of Home Science Extension Education            |
|              |  | C.O.-2: Community Development problems and Role of Home Scientists. |
|              |  | C.O.-3: Teaching Methods & aids                                     |
|              |  | C.O.-4 Attitude towards Home Science                                |
|              |  | Curriculum planning in Home Science                                 |

## B.A. 2<sup>nd</sup> Year (Home Science)

| Department   | Course   | After completion of these course students  |
|--------------|--|--|
| Home Science | B.A 2 <sup>nd</sup><br>Home Science<br>Clothing and textiles | C.O.-1: Gain knowledge on the characteristics of the fabrics and their use.      |
|              |  | C.O.-2: Understand the Methods of different fabrics their finishing and storage. |
|              |  | C.O.-3: Learn the basic stitching skills.  |
|              |  | C.O.-4 know the basic of computers   |
|              |  | C.O. -5 Knowledge about embroidery   |

## B.A. 2<sup>nd</sup> Year (Home Science)

| Department   | Course   | After completion of these course students                                 |
|--------------|--|---|
| Home Science | B.A 2 <sup>nd</sup><br>Home Science<br>Familial Recourse<br>Management | C.O.-1: Fundamentals of resources Management                              |
|              |  | C.O.-2:Inculcate skills in identifying Creating                           |
|              |  | C.O.-3: Using available resources   |
|              |  | C.O.-4 Understand the scientific application of the process of Management |
|              |  | C.O. -5 Use of Resources  |

**B.A. 3<sup>rd</sup> Year (Home Science)**

| Department   | Course   | After completion of these course students                     |
|--------------|--|---|
| Home Science | B.A 3 <sup>rd</sup><br>Home Science<br>Human development | C.O.-1: Development meaning of child growth and development . |
|              |  | C.O.-2: Stages of development                                 |
|              |  | C.O.-3: Childhood Adolescence                                 |
|              |  | C.O.-Development of emotional behavior characteristics        |
|              |  | C.O. -5 Play meaning of play, work and play children's play   |

**B.A. 3<sup>rd</sup> Year (Home Science)**

| Department   | Course  | After completion of these course students                     |
|--------------|---|---|
| Home Science | B.A 3 <sup>rd</sup><br>Home Science<br>Food and Nutrition | C.O.-1 Concept of food and Nutrition                          |
|              |   | C.O.-2: Understand the effect of cooking on food              |
|              |   | C.O.-3: Create awareness about food preservation              |
|              |   | C.O.-4 Meal Planning and nutritional requirements.            |
|              |   | C.O. -5 Understand various processes involved within the body |

## Department of History

| Course                            | Title  | Course Outcome   |
|-----------------------------------|--|--|
| <b>B.A. I<sup>st</sup> Year</b>   | History of India (Beginning to 1206 A.D.)            | Students understand about beginning to till 1206 A.D. in India.  |
|                                   | History of World (1453-1890 A.D.)                    | Students know about Aadhunikyug of Europe, Revaluation of America and French, Industrial Revaluation, Integration of Germany and Italy.          |
| <b>B.A. II<sup>nd</sup> Year</b>  | History of India (1206-1761 A.D.)                    | Students know about Sultante and Mughal period in India.   |
|                                   | History of World (1890-1964 A.D.)                    | Students know about foreign policy of Germany; balkans countries; cause, event and result of First & Second World War.                           |
| <b>B.A. III<sup>rd</sup> Year</b> | History of India (1761-1947 A.D.)                    | Students understand to British rule in India and their Administration, Indian renaissance, British Rule in Chhattisgarh and Social Reform.       |
|                                   | History of Indian National Movement (1857-1947 A.D.) | Students know about Revolt of 1857, Nationalism and Indian National Movement, Establishment of Indian National Congress and Revolution in India. |

## MA History

| Course                               | Title  | Course Outcome  |
|--------------------------------------|--|---|
| <b>M.A. I<sup>st</sup> Semester</b>  | Historiography Method (Compulsory)                 | Students know about History of other branches Sources of History, Thinkers of History and different principle's of History. |
|                                      | Modern world 1800-1920 A.D. (Compulsory)           | Students know about Modern world events, which is effected to all over world.   |
|                                      | Ancient and Medieval Chhattisgarh (Compulsory)     | Students know about history of ancient and medieval Chhattisgarh.   |
|                                      | History of Great Britain 1815-1885 A.D. (Optional) | Students know abouts History of Great Britain from 1815 to 1885 A.D.  |
| <b>M.A. II<sup>nd</sup> Semester</b> | Historiography Writing (Compulsory)                | Students know about Major Trends In History Writing.  |
|                                      | Contemporary world 1920-2000 A.D. (Compulsory)     | Students know about Contemporary world events, which is effected to all over world.   |
|                                      | Modern Chhattisgarh (Compulsory)                   | Students know about modern history of Chhattisgarh.   |
|                                      | History of Great                                   | Students know abouts History of Great Britain from  |

|                                       |  |  |
|---------------------------------------|--|--|
|                                       | Britain 1885-1956 A.D. (Optional)                                  | 1885 to 1956 A.D.  |
| <b>M.A. III<sup>rd</sup> Semester</b> | Indian polity and economy in the Sultanate period (1200-1526 A.D.) | Students know about political and economic about Delhi Sultante.   |
|                                       | Society and culture in the Sultanate period (1200-1526 A.D.)       | Students know about Social and Culture life about Delhi Sultante.  |
|                                       | History of Indian National Movement (1857 to 1922 A.D.) Optional-I | Students know about Indian National Movement, Establishment of Indian National Congress and Nationalism in India.      |
|                                       | Cultural History of India (Beginning to 1526 A.D.) Optional-II     | The students know about Cultural History of Indian in beginning to 1526 A.D.   |
| <b>M.A. IV<sup>th</sup> Semester</b>  | Indian Polity and Economy in the Mughal period (1526-1750 A.D.)    | Students know about Administration, political history, religious policy, economic and social life about Mughal Period. |
|                                       | Society and Culture in the Mughal period (1526-1750 A.D.)          | Students know about Social and cultural life about Mughal Period.  |
|                                       | History of Indian National Movement (1922 to 1947 A.D.) Optional   | Students know abouts Indian National Movement, Revolutionary movement and National movements under Mahatma Gandhi.     |
|                                       | Cultural History of India (1526-1950 A.D.) Optional                | The students know about Cultural History of Indian in 1526 to 1950 A.D.  |

## **DEPARTMENT OF GEOGRAPHY**

### **PROGRAMME SPECIFIC OUTCOME**

#### **M.A I FIRST SEMESTER**

**UPON COMPLETION OF (M.A GEOGRAPHY) , STUDENTS WILL ABLE TO LEARN FOLLOWING THINGS :---**

1. Contrasting and clarifying forces of Crustal instability, Plate Tectonics, Earthquakes and Vulcanicity in the discipline of geography ,helping them to understand the present as well as the past natural structures.
2. Interpretating and analyzing Geological structure and landform as well as landscape and Erosion surfaces in the applied Geomorphology.
3. The application of Climatology has helped students in general the principles of Atmospheric circulation like Jet stream, EL NINO, Monsoon winds , and cyclones throughout India and World.
- 4.Responses to theory and philosophies of Positivism, behaviourism and humanistic approach has inculcate the significance of human social behavior and its outlook towards mother earth and nature.

#### **M.A II SEMESTER**

1. Identifying and assess how the geographic contents applied in everyday life and to solve problems like preservation and conservation of Environment and Natural Resources.
2. Ethical engagement of Different pressure groups and Students in formulating Environment legislation , laws , ACT for propogating Wildlife and Forest laws.
3. Geography has helped students in unfolding the Contemporary issues of modern India like Food Security, Nutrition, Hunger, Role of irrigation and technological know how.

#### **M.A III SEMESTER**

- 1 .Research Methodology of Geography has helped define Data collection, Observation, Processing and Classification of DATA in making Reports , layouts and Research papers.
2. Geography as a Subject has helped learn the dynamics of GIS, Emergency Response System in case of Disaster management during Floods, Droughts, Earthquakes or any natural calamity , helping DO'S or DON'T in these scenario.
3. Geography has helped students in unfolding the Contemporary issues of modern India like Food Security, Nutrition, Hunger, Role of irrigation and technological know how.
4. Geological structure and relief elements has helped conceptualize us Sources of Minerals, Soils , Drainage , Power like natural gas and hydroelectricity.

## **M.A IV SEMESTER**

1. Students participation has drastically increased in participation of Environmental education and Ecological impacts on Earth.
2. Agriculture is backbone of our Country and monsoon is a pure Gamble by chance of Climatic pattern therefore understanding it has helped student and their family perform better in agricultural economy in Cropping pattern, Commercialization, Diversification, Efficiency and Productivity. It also helped our students to study Agricultural data.
3. Classifying and Functionalizing the Structure of Towns, Cities ,through URBAN GEOGRAPHY is a scope for better Urban and Landuse planning which students has started to assess its benefit thereby making it an important contribution.

### **DEPARTMENT -GEOGHRAPHY**

#### **COURSE OUTCOME**

##### **B.A I FIRST YEAR GEOGRAPHY**

UPON COMPLETION OF THESE COURSE STUDENTS WILL BE ABLE TO ACCOMPLISH AND LEARN FOLLOWING THINGS :-

CO.1 The study material of physical geography seeks to understand origin and development of various landforms on earth surfaces helping to imaginatively analyse the process of rock , mountain and other visible structures on earth, thereby conceiving the idea of past helping future process structure.

CO.2 In Human Geography , not only the geographical facts are observed which make it clear the different physical forms for the students , there will be better understanding of its cities, settlement and habitat. There will also be understanding on the effect of means of transport and economic activities.

##### **B.A II SECOND YEAR GEOGRAPHY**

CO.1. Economic geography is related to ways of earning a living in which relationship between basic resources of surface and human activities is studied. Students can realize ,demonstrate and contribute to their distribution and consumption in today's world as per the need arise.

CO. 2 Under geography of india, physical features such as physical appearance, soil in natural resources, water resources, forests , minerals, population and power resources can be studied accordingly.

##### **B.A III FINAL YEAR GEOGRAPHY**

CO.1 These techniques are used as a means in solving any problem under Geographic Information System. Due to the quick solutions, the interest of common man and students towards them has increased tremendously & continuously. This is the reason why there is an urgent need for their dissemination through mapping , integration ,pictorial description of events, presentation of important ideas , solution of new problems can be done.

CO.2 Under the regional study in Geography of Chhattisgarh , there will be an understanding of geological structure, geomorphic region, drainage system, agriculture, availability of mineral resources, population, trade, transport and economic development of Chhattisgarh.

**COURSE OUTCOME OF BOTANY**  
**CORE COURSE I (1271)–PLANT DIVERSITY –I**

**TITLE : BACTERIA ,VIRUSES, FUNGI, LICHENS AND ALGAE**

On completion of this Course students will be able

- 1.To gain knowledge about microbial diversity.
2. To gain Knowledge about Bacterial and viruses disease.
3. To have the ability to utilize the concept of mushroom cultivation.
- 4.To know about various plant disease and their control measures.
- 5.To understand the phylogeny of plants.
- 6.To explore Economic Importance of Algae ,fungi and lichens.
- 7.Learn about the structure, pigmentation , Food reserves and methods of reproduction of Algae.

**CORE COURSE II (1272) –PLANT DIVERSITY –II**

**TITLE –BRYOPHYTES , PTERIDOPHYTES ,GYMNOSPERMS AND PALEOBOTANY**

On completion of this Course students will be able.

1. To understand the phylogeny from Bryophytes and Pteridophytes .
2. To know the evolution of Sporophytes in Bryophytes.
3. Understand the stellar evolution seed formation habit in pteridophytes.
4. To gain knowledge about life cycle of Gymnosperm plants.
5. To explain about fossils and fossilization.
6. To understand about Geological time scale.
7. To know about Heterospory and origin of seed habit.
8. To know about the structure life history and economic importance of gymnosperm.

**PRACTICALE COURES - I**

1. Microscopic observation and identification Algae , fungi ,lichens and Pteridophytes gymnosperm.
2. Observation of crop plants infected by the pathogens included in the syllabus and study of symptoms causative agent and etiology.
3. Mushroom cultivation in Laboratory.
4. Fossils study.

**CORE COURSE- III (1317)**

**TITLE –PLANT TAXONOMY , ECONOMIC BOTANY , PLANT ANATOMY AND EMBRYOLOGY OF ANGIOSPERM**

On completion of this Course students will be able

1. To recognized the major group of vascular plants and their phylogenetic relationships.
2. To gain proficiency in the use of keys and identification manuals for identifying any unknown plant to species level.
3. Gain knowledge about botanical survey of India.
4. Briefly studied on herbarium techniques.
5. Learn the type of classification- Artificial, Natural and phylogenetic.
6. To explore the use of plants as Medicine by traditional approaches.
7. To understand different system of Medicine their uses.



### **CORE COURSE- IV(1318)**

#### TITLE- ECOLOGY AND PLANT PHYSIOLOGY

1. To understand Ecological relationship between organisms and their environment.
2. To identify diversity of life form in an ecosystem.
3. To understand the role that biodiversity plays in conservation science.
4. Understand the population and community Ecology.
5. Studied various statistical method of analysis.
6. Learn the approaches to the study of Ecology ( Autecology , Synecology , Genecology )
7. To understand plant physiological process and metabolism.
8. To explain the role of micro nutrient in plant growth and development.
9. To relate photosynthesis with the formation of primary and secondary metabolite.
10. To clarify the mechanism and breaking of dormancy.
11. Learn about sensory photobiology.
12. know about the plants growth hormones ( Auxins , Gibberellians , Cytokinins , Ethylenes )
13. Understand the Biosynthesis of terpenes, phenols and nitrogenous compound.

### **PRACTICAL COURSES – II**

1. Ecological field study quadrats methods of vegetation study.
2. Demonstration of Osmosis .
3. Herbarium formation.
4. Ethnobotanical study.
5. Family description of Angiospermic plant.
6. Slide preparation of monocot and dicot root stem and leaves.
7. Demonstration of photosynthesis.
8. Demonstration of transpiration by Ganong's potometer.
9. R.Q. measurement by Ganong's respirometer.

### **CORE COURSE- V (1366)**

#### TITLE – PLANT PHYSIOLOGY , BIOCHEMISTRY AND BIOTECHNOLOGY

1. To understand Ecological relationship between organisms and their environment.
2. To identify diversity of life form in an ecosystem.
3. To understand the role that biodiversity plays in conservation science.
4. Recombinant DNA technology.
5. To understand plant physiological process and metabolism.
6. To explain the role of micro nutrient in plant growth and development.
7. To relate photosynthesis with the formation of primary and secondary metabolite.
8. To clarify the mechanism and breaking of dormancy.
9. know about the plants growth hormones ( Auxins , Gibberellians , Cytokinins , Ethylenes )
10. Understand the Biosynthesis of terpenes, phenols and nitrogenous compound.
11. Learn the micro and megasporogenesis.
12. Learn the specific and non-specific method of gene transfer.
13. Application of biotechnology in Agriculture.
14. Genetic engineering.

### **CORE COURSE- VI (1367)**

#### TITLE- ECOLOGY AND UTILIZATION OF PLANT

1. To understand Ecological relationship between organisms and their environment.
2. To identify diversity of life form in an ecosystem.
3. To understand the role that biodiversity plays in conservation science.
4. Understand the population and community Ecology.
5. Studied various statistical method of analysis.
6. Learn the approaches to the study of Ecology ( Autecology , Synecology , Genecology )
7. To explore the use of plants as Medicine by traditional approaches.
8. To understand different system of Medicine their uses.
9. Morphological , Anatomical and physiological responses of plant to water
10. Xerosere and hydrosere
11. Biogeographical regions of India.

### **PRACTICAL COURSES – III**

1. Ecological field study quadrats methods of vegetation study.
2. Demonstration of Osmosis .
3. Ethnobotanical study.
4. Demonstration of photosynthesis.
5. Demonstration of transpiration by Ganong's potometer.
6. R.Q. measurement by Ganong's respirometer.
7. Biochemical test Glucose , Sucrose , Starch , Proteins, Fat , Lipids.

## Course Outcomes : Subject Zoology

| Department | Course                    | C.O.1 – Upon successful completion of this course a student will be able to   |
|------------|---------------------------|---|
| Zoology    | B.Sc.1 <sup>st</sup> Year | <p>Paper I- Cell biology and Non-chordate</p> <ul style="list-style-type: none"> <li>• Cell and cell organelles.</li> <li>• Cell division and an elementary idea of cancer cells and immunity.</li> <li>• General Characters and classification of phylum protozoa, porifera, coelenterata, Platyhelminthes, Nematelminthes, Annelida, Arthropoda, Mollusca and Echinodermata</li> <li>• Structure and life cycle of invertebrate: paramecium, sycon, obelia, Fasciola, Ascaris, Pheretima, Palaemone, Pila and Asterias,</li> </ul> <p>Paper II- Chordate and embryology</p> <ul style="list-style-type: none"> <li>• Structure of Balanoglossus and Amphioxus.</li> <li>• Comparative account of petromyzon and Myxine</li> <li>• To gain knowledge about fishes, Amphibia, reptiles and mammals.</li> <li>• To know the various aspects of embryonic development.</li> </ul> |
|            |                           | <p>Practical Work</p> <ul style="list-style-type: none"> <li>• dissection of Earthworm, periplaneta and Pila though alternatives methods clay drawing and model.</li> <li>• Museum specimen and slide of invertebrates</li> <li>• Adaptive characters of aquatic, terrestrial, aerial and desert animals.</li> <li>• Embryological slide of frog &amp; chick and cytological slide</li> </ul>   |
|            |                           | <p>C.O.2 – upon completion of this course a student will be able to.</p> <ol style="list-style-type: none"> <li>1. To know basic difference between anatomical and physiological aspect a different vertebrates system.</li> <li>2. To know endoskeleton, circulatory system and urogenital system.</li> <li>3. To understand nervous system and sense organ.</li> <li>4. Know about the digestive system circulatory system, blood coagulation and blood coagulation</li> </ol>  |

5. Learn about excretion, muscle contraction and nerve transmission

Paper-II – Vertebrate endocrinology, Reproductive Biology Behavior, evolution and applied zoology,

1. Understand different endocrine glands and mechanism of hormonal Action easily, z. To gain knowledge of Reproductive system of ueterbrates.
2. Learn about organic evolution of vertebrates.
3. To understand the behavior of animals.
4. To understand the various aspects of applied zoology.

Practical Work:

1. Morphological and anatomical study by museum specimen, slide and dissection C alternative method.
2. Skeleton system of vertebrates.
3. Applied zoology by life cycle of honey bee and silk worm.

C.O. (III) – Upon success completion of this course a student will be able to,

Paper-I Ecology, Environment biology, Toxicology, microbiology and medical zoology.

1. Know about the major ecosystem of the world population density frequency.
2. To gain knowledge about food chain energy flow, natural resource
3. To understand various toxicant of nature.
4. To know basic knowledge of microbiology.
5. To understand medical zoology by life cycle entamoeba, trypanosoma plasmodium and schistsoma.

Paper–II Genetics, Cell physiology, Biochemistry, Biotechnology, and Bio technics.

1. To gain knowledge about human genetics.
2. To understand the physiology of cell.
3. Basic concept of biochemistry and metabolism.
4. To know genetic engineering technique.
5. To understand working principle of different bio instruments like microscope pH meter, colorimeter, chromatography and centrifuge,

Practical Work

1. Determination of population density, frequency.
2. Blood group detection.
3. R.B.Cs and W.B.Cs counting by haemocytometer .
4. Staining method of bacteria.
5. Study of permanent slide of parasite

# **COURSE OUTCOME OF CHEMISTRY**

## **B.SC.PART I**

### **COURSE CODE INORGANIC CHEMISTRY**

- 1 Understand the modern periodic table and the periodic properties the atomic and ionic size.
- 2 Ionization energy, electron affinity, Electro negativity etc.
- 3 Understand the behavior of the inert gases.
- 4 know about s- block and p-block elements.
- 5 Have basic knowledge of chemical bonding.

### **COURSE CODE II ORGANIC CHEMISTRY**

- 1 Understand the basic principles of organic chemistry.
- 2 Understand the basic term for chemical reaction i.e. substrate and reagent, types of reagent, electrophilic and nucleophilic reaction.
- 3 Gain information about stereochemistry.
- 4 Know about heterocyclic compounds.

### **COURSE CODE III PHYSICAL CHEMISTRY**

- 1 Understand the basic principle of physical.
- 2 Know about gaseous state chemistry.
- 3 Have through knowledge of electro chemistry and chemical equilibrium.
- 4 Know about Importance of chemical kinetic .

## **B.Sc. PART II**

### **COURSE CODE IV INORGANIC CHEMISTR**

- 1 Know the Chemistry of transition series elements.
- 2 Know About occurrence and isolation of lanthanides.
- 3 Know the stereo chemistry of coordination compounds.
- 4 Have adequate information about acids and bases.

### **COURSE CODE V ORGANIC CHEMISTRY**

- 1 know the chemistry of organic halides.
- 2 Understand the preparation and properties of alcohol.
- 3 Gain knowledge about different name reaction.
- 4, Ability to complete the given reaction.

### **COURSE CODE VI PHYSICAL CHEMISTRY**

- 1, Know insight into principle of thermodynamics.
- 2, Know principle of photochemistry.
- 3, Know the chemical equilibrium.
- 4, Have knowledge of phase rule and Nernst distribution law.

### **B.SC.PART III**

### **COURSE CODE VII INORGANIC CHEMISTRY**

- 1 Know the metal- ligand bonding in transition metal complexes.
- 2 Detailed knowledge of magnetic properties of transition metal complexes.
- 3 Gain knowledge of definition and classification of organ metallic compound.
- 4 Know the biological role of alkali and alkaline earth metals.

### **COURSE CODE VIII ORGANIC CHEMISTRY**

- 1 Understand the synthesis and properties of organ metallic
- 2 Know the basic principle of protons magnetic resonance spectroscopy
- 3 Proper information about preparation and properties of heterocyclic compound.
- 4 Know the chemistry of dyes.
- 5 Understand the classification nomenclature and chemistry of carbohydrates protein and polymers.

### **COURSE CODE PHYSICAL CHEMISTRY**

- 1 Know the basic of electro chemistry.
- 2 Know the basic principle of electronic spectroscopy.
- 3 Understand the theories of strong electrolytes.

## Course Outcomes M.Sc. Chemistry Each Semester

|                           |                           |  |
|---------------------------|---------------------------|--|
| <b>M.Sc<br/>Chemistry</b> | <b>M.Sc. Semester- I</b>  | <p>CO-1 : Students will study symmetry and group theory in chemistry and will be able to imagine and visualize the point group.</p> <p>CO-2: Students will get acquainted with the unifying principles of Spectroscopy like uncertainty relation, natural line width, selection rules, Born Oppenheimer approximation, energy levels etc.</p> <p>CO-3: Students will get acquainted with the basics of computers and computing computer programming in C languages</p> <p>CO-4: Students will learn Atomic absorption spectroscopy its basic principle and instrumentation and applications in soil and water analysis</p>   |
|                           | <b>M.Sc. Semester-II</b>  | <p>CO-1: Students will understand instrumentation and working procedure of molecular spectroscopy and microwave spectroscopy</p> <p>CO-2: Students will be able to understand the concept of the infrared Spectroscopy Raman spectroscopy and their instrumental techniques they will be able to predict structural properties of compounds .</p> <p>CO-3: Students will study the Nuclear Magnetic Resonance (NMR) Spectroscopy and Nuclear Quadrupole Resonance (NQR) Spectroscopy.</p> <p>CO-4: Students will be acquainted with the photoelectron spectroscopy, photoacoustic spectroscopy and electron spin resonance spectroscopy.</p>   |
|                           | <b>M.Sc. Semester-III</b> | <p>CO-1: Students will be able to quantify the photo inorganic reactions and roles of instruments those are used in structural elucidation of molecules .</p> <p>CO-3: Students will be able to understand and justify the metals and their significant roles in biological processes like respiration and photosynthesis and catalytic activities</p> <p>CO-3: Students will be able to understand organometallic and chemical properties like catalysis, drugs of synthesized organometallic complexes.</p> <p>CO-4: Students will learn about the instrumentation and application of various spectroscopy instruments like FTIR, UV –VIS, NMR spectra etc. for the structural determination of organic and inorganic molecules.</p> |
|                           | <b>M.Sc. Semester-IV</b>  | <p>CO-1: detailed knowledge about glasses ceramics composites and non materials Nanomaterials</p> <p>CO-2: Understanding of microscopic composites nano material</p> <p>CO-3: understanding about principles and applications of TGA, DTA and DSC</p> <p>CO-4: understanding of radiation chemistry radio analytical techniques at 17</p>  |

|                            |                       |  |
|----------------------------|-----------------------|--|
| <b>B.Sc.<br/>Chemistry</b> | <b>B.Sc. Part- I</b>  | <p>CO-1 : Students will study symmetry and group theory in chemistry and will be able to imagine and visualise the point group.</p> <p>CO-2: Students will get acquainted with the unifying principles of Spectroscopy like uncertainty relation, natural line width, selection rules, Born Oppenheimer approximation, energy levels etc.</p> <p>CO-3: Students will get acquainted with the basics of computers and computing computer programming in C languages</p> <p>CO-4: Students will learn Atomic absorption spectroscopy its basic principle and instrumentation and applications in soil and water analysis</p> |
|                            | <b>B.Sc. Part- II</b> | <p>CO-1: Students will understand instrumentation and working</p>  |

|  |                               |  |
|--|-------------------------------|--|
|  |                               | <p>procedure of molecular spectroscopy and microwave spectroscopy</p> <p>CO-2: Students will be able to understand the concept of the infrared Spectroscopy Raman spectroscopy and their instrumental techniques they will be able to predict structural properties of compounds .</p> <p>CO-3: Students will study the Nuclear Magnetic Resonance (NMR) Spectroscopy and Nuclear Quadrupole Resonance (NQR) Spectroscopy.</p> <p>CO-4: Students will be acquainted with the photoelectron spectroscopy, photoacoustic spectroscopy and electron spin resonance spectroscopy.</p>  |
|  | <p><b>B.Sc. Part- III</b></p> | <p>CO-1: Students will be able to quantify the photo inorganic reactions and roles of instruments those are used in structural elucidation of molecules .</p> <p>CO-3: Students will be able to understand and justify the metals and their significant roles in biological processes like respiration and photosynthesis and catalytic activities</p> <p>CO-3: Students will be able to understand organometallic and chemical properties like catalysis, drugs of synthesized organometallic complexes.</p> <p>CO-4: Students will learn about the instrumentation and application of various spectroscopy instruments like FTIR, UV –VIS, NMR spectra etc. for the structural determination of organic and inorganic molecules.</p> |



# Department of Physics

## Course Outcomes B.sc.1<sup>st</sup> year

|                               |  |  |
|-------------------------------|--|--|
| B.Sc. 1 <sup>st</sup><br>Year | B.Sc.1 <sup>st</sup> year<br><br>(paper1)<br>Mechanics, oscilation and properties of matter      | CO1:- Cartesian, cylindrical and spherical<br>CO-2: Rigid body motion, rotational motion, moment of inertia and their products.<br>CO-3: Elasticity and , strain & stress, elastic limit, Hooke's law. |
|                               | (paper1)<br>Electricity, Magnetism & Electromagnetic theory                                      | CO-1: Repeated integrals of a function of more than one variable.<br>CO-2: Coulomb's law in vaccum expressed in vector forms.<br>CO-3:Dielectric constant, polar & non Polar dielectrics.              |
| B.Sc. 2 <sup>nd</sup><br>Year | B.Sc.2 <sup>nd</sup> year<br>(paper1)<br>Thermodynamics, Kinetic theory and statistical physics. | CO-1; The laws of thermodynamics.<br>CO-2: Maxwellian distribution of speeds in an ideal gas<br>CO-3: The statistical basis of thermodynamics  |
|                               | (paper2)<br>Waves, acoustics and optics  | CO-1: Wave in media and infrasonic waves & applications.<br>CO-2: Interference of light<br>CO-3Laser system, Basic properties of Lasers.   |
| B.Sc. 3 <sup>rd</sup><br>Year | (paper1)<br>Relativity, Quantum mechanics, automic molecular and nuclear physics.                | Co-1: Origin of the quantum theory.<br>CO-2: Quantum mechanics, Schrodinger's equation.<br>CO-3: Structure of nuclear, Basic properties of nuclear   |
|                               | (Paper2)<br>Solid state physics, solid state devices and electronics.                            | CO-1: Intrinsic & intrinsic semiconductors.<br>CO-2: Half and full wave rectifier.<br>CO-4: Free electron model of a metal.  |

## **Department of Mathematics**

### **COURSE OUTCOME:**

#### **B.Sc. 1<sup>st</sup> year**

##### **Paper1: Algebra and trigonometry**

- CO 1: Matrices are used in solving linear equations.
- CO2. Understanding De-Moivre's theorem and its applications.
- CO 3: To learn about solution of cubic equation and biquadratic equation.

##### **Paper 2: Calculus**

- CO1: To trace various equations by applying concepts of asymptotes, nodes, singular point etc
- CO2: To apply higher order derivation in order to get expansions.
- CO3: TO learn about meaning of differential equations

##### **Paper 3:- Vector analysis and Geometry.**

- CO1: Understanding vector differentiation.
- CO2: To learn application of Gauss Theorem, Stokes Theorem in setting of the differential form.
- CO3: To learn geometric meaning of differential equation.

#### **B.Sc. 2<sup>nd</sup> year**

##### **Paper 1:- Advanced calculus**

- CO1- To understanding concepts of the convergence of series and sequence.
- CO2- To learn about application of partial differentiation on obtaining envelopes and evaluates of given family of curves.
- CO3- Understanding Beta , gamma function and their application.

##### **Paper 2:- Differential Equation**

- CO1- To solve Laplace transformation of the function
- CO2- To learn Charpit's Methods & Monge's Method
- CO3- To learn series Method, Bessel's & Legendre's function.

### **Paper 3:- mechanics**

CO1- To understand various analytic condition of equilibrium principle of virtual work, catenary.

CO2- To learn about central axis, simple Harmonic Motion, Velocity & acceleration, central orbits.

CO3- To understand Kepler's law. Motion on smooth and rough plane curves, resisting medium.

### **B.Sc. 3<sup>rd</sup> year**

#### **Analysis**

CO1- To learn series & convergence, implicit function, fourier series etc.

CO2- to learn Riemann integration, Conformal mapping, Mobius Transformations.

Co3- To understand, compactness, connectedness, etc.

#### **Abstract Algebra.**

Co1- To understand group Automorphism, sylow's theorem.

CO2- To understand Homomorphism of rings, Euclidean rings

CO3- to understand Inner product spaces, orthogonal vectors, gram schmidt orthogonalization process.

#### **Discrete Mathematics**

CO1- To understand the concept of directed graphs, connected and strongly connected graph etc.

Co2- To understand and applications of Boolean algebra in switching circuits.

Co3- To understand Numeric function, Use in recurrence relations, Generating function.

### **Course Outcome of M.Sc. (2 Year Programme)**

#### **M.Sc.1<sup>st</sup> Semester**

##### **Paper1: Advanced Abstract algebra**

CO1: To understand Groups, Jordan-Holder theorem, field theory.

CO2: TO understand Fields, Automorphism, Galois theory.

CO3: Solution of polynomials equations by radicals, solve general equation by radicals.

##### **Paper2: Real Analysis**

CO1: Understand sequence and series of function, tests for the convergence of series and sequence Weierstrass Approximation theorem.

CO2: Understand power series, Abel's and Tauber's theorems, Riemann's theorem.

CO3: Understanding Derivatives of functions, Jacobians, differentiation of Integrals, stoke's theorem.

**Paper3:**

CO1: understanding topology, first and second countable spaces,

CO2: understanding Uryshan's Lemma, Tietze extension theorem compactness, stone-cech compact fiction.

CO3: Learning compactness in metrix space, companents, locally connected spaces.

**Paper4: Complex Analysis**

CO1: understanding Cauchy-goursat theorem. Cauchy's integral formula, Schwarz Lemma, Rouche's and inverse functions.

CO2: Learning Bilinears, trasformations, conformal mappings residres, Cauchy & residue theorem

CO3: Hurwitz's theorem, Montel's theorem, Riemann mapping theorem.

**Paper5:**

CO1: Understanding statements, semi groups, Menoids, Homomorphism of semi groups and monoids basic Homomorphism theorem .

CO2: Lattices, Boolean Algebra, Boolean algebra as lattices , the switching algebra, direct products.

CO3: Learning Canonical forms, switching algebra, gates. The Karnaugh Map methods.

CO4: Grammars, Languages, Klean's theorem, pumping Lemma.

**M.Sc. 2<sup>nd</sup> semester****Paper1:- Advanced Abstract Algebra**

CO1: Understanding modules, Hilbert Basis theorem, Wedduburn Artin theorem. Nother Lasker theorem.

CO2: Learning Algebra of linear transformations, canonical forms, Nilpotent transformations. Jordan forms.

CO3: Understanding smith normal form, principle ideal Domain.

**Paper2: Real Analysis**

CO1: Understanding Riemann-stieltjes integral, fundamental theorem of calculus.

CO2: learning Lebesgue Quiles measure, Measurable and non-measurable sets, measures, Quter measure.

CO3: : Understanding four Derivatives, solving differentiation and integrations.

CO4: : Understanding LP spaces, Jensen's inequality, Holder and Minkowski inequality.

**Paper3: general and algebraic topology**

CO1: Understanding product topology, Projection maps, product spaces, countability, connectedness & compactness of product topology.

Co2: The Uryshon-Metrization theorem, the Nagata Smirnov metrization theorem, the Smirnov metrization theorem.

CO3: Learning Nets, Filters, Ultra-filters, the homotopy of paths, the fundamental theorem of algebra.

#### **Paper4: Advanced complex Analysis**

CO1: Weierstrass factorization theorem, Runge's theorem, Mittag-Leffler's theorem.

CO2: Learning analytic continuation, power series method, Schwarz reflection principles.

CO3: Hadamard's three circle theorem, Hadamard's factorization theorem.

#### **Paper5: Advanced Discrete Mathematics**

CO1: Graph theory, & its types, Kuratowski's theorem, trees, Euler's theorem, path, circuits.

CO2: Finite state machines, finite automata.

### **M.Sc. 3<sup>rd</sup> semester**

#### **Paper1: Integration theory and functional analysis.**

CO1: Understanding signed measure and related theorems.

CO2: Understanding Lebesgue-Stieltjes integral, Fubini's theorem, Baire sets, Riesz Markoff theorem.

CO3: Understanding normed linear space & their properties, linear transformations.

#### **Paper2: Partial differential equation mechanics**

CO1: Learning partial differential equations, related theorems, Heat equation, wave equation.

CO2: Lagrange's equation of first kind, second kind, energy equation, Denkin's equation, Routh's equation, Poisson's Bracket, Jacobi Poisson Theorem.

CO3: Brachistochrone problem, fundamental lemma of calculus.

#### **Paper3: Fundamentals of CS, loops, & Data structure**

CO1: Object oriented programming, classes, scope

CO2: Overloaded functions, operators, Templates.

CO3: Data structure, Tree, B-Tree, sorting, Hashing.

#### **Paper4: Operations research**

CO1: Learning OR and its scope, Necessity, Duality, Sensitivity Analysis.

CO2: Solving Dual simplex Method, simplex Method, Big-M Method.

CO3: Solving Transportation, Assignment Problems,

CO4: Learning Shortest path problem, PERT-CPM method.

#### **Paper5: Programming in C (with ANSI feature)**

CO1: Learning functions, Variables, Constants, Assignment statements, preprocessors.

CO2: Learning Integers, Pointers, Loops, Switch statement, Conditional Branching.

CO3: Operators, Expressions, Arrays.

## **M.SC. 4<sup>th</sup> Semester**

### **Paper 1: Functional Analysis**

CO1: Learning uniform Boundedness theorem & its consequence, Hahn-Banach theorem for real space & complex space & normed linear space.

CO2: Closed range theorem, Inner Product space, Hilbert space, self adjoint operators, Lax-Milgram theorem.

### **Paper2: partial Differential equation**

CO1: Learning Envelopes and theorems related to it.

CO2: Hamilton's Principle, Poincaré integral Whittaker's equations, Lee Hwa chung's theorem.

CO3: Lagrange's Bracket, poisson Bracket, Hamilton Jacobi equation.

### **Paper3: D.S & DBMS.**

CO1: Database system, relational algebra, calculus, SQL

CO2: Integrity constraints, Normalization 1NF, 2NF, 3NF, BCNF.

CO3: Operating system, I/O management

### **Paper4: Operations Research.**

CO1: Learning Game theory, Dynamic Programming

CO2: Integral Programming, Blending Programs.

CO3: Solving Nonlinear Programming, Kuhn-tucker conditions, convex programming.

### **Paper5: Programming in C.**

CO1: learning storage classes, scope, semantics, syntax, pointers

CO2: Learning functions, C programming, structure, Unions, enum declarations.

CO3: I/O streams, Header files, line control

## Course Outcomes B.sc. computer science Each Year

|                                   |  |   |
|-----------------------------------|--|---|
| <p>B.Sc.<br/>Computer Science</p> | <p>B.Sc. CS<br/>1<sup>st</sup> year<br/><br/>(paper1: computer hardware<br/>Paper2:Software)</p> | <p>Co-1: students will study in computer hardware , all fundamental structure and all basic knowledge of computer Hardware &amp; components of C.P.U.<br/>CO-2: student will learn computer system , Hardware and Architecture of computer.<br/>CO-3: students will learn the programming principles of C programming language. Basic introduction of C language , creating and initialize variables, constant, Function, Array, pointer ect. And create statements for decisions and loops.<br/>CO-4: Develop small application programs in C language.</p>  |
|                                   | <p>B.Sc. CS<br/>2<sup>nd</sup> year<br/><br/>(paper1: computer hardware<br/>Paper2:Software)</p> | <p>CO-1: student will learn about the components of a computer system. Learn about the software and its classification. Understand different computer peripherals.<br/>CO-2: learn about HTML basic , all Tags , HTML document and file , editing, knowledge of XHTML, and WEB site designing.<br/>CO-3: Student will learn about object oriented programming . C++ programming language .<br/>CO-4: Declare, initialize and process variables, constants and arrays .creating statements for decisions and loops. Create classes, objects and defining functions and return values.<br/>Understanding about pointers and functions.</p>      |
|                                   | <p>B.Sc. CS<br/>3rd year<br/><br/>(paper1: computer hardware<br/>Paper2:Software)</p>            | <p>CO-1: student will learn about appreciate the need for DATABASE approach and understanding the components and roles of DBMS.<br/>CO-2: write SQL queries for the given problem statements, convert ER diagram into a set of relations representing logical data model.<br/>CO-3: students will learn about Microsoft Visual Basic introduction and tools of VB.<br/>CO-4: understanding the frame and working on it using different tool like Label, Text box, Combo box, list box, drop down list etc.<br/>CO-5: student will learn about developing a project or software through visual basic or event driven programming language.</p> |

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|  |  | Developing software and manipulating data using a appropriate data base. |
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**COURSE OUTCOMES BACHELOR OF COMPUTER APPLICATIONS (BCA) :**

| COURSE | PAPERS                                  | OUTCOMES  |
|--------|---|---|
| BCA-I  | Discrete Mathematics (BCA-101)          | Upon completion of this course, students will be able to: <ul style="list-style-type: none"> <li>➤ Understand and implement the Permutation and Combination.</li> <li>➤ Understand and implement Recursion &amp; Recurrence.</li> <li>➤ Understand the theory of Sets, Relations and functions.</li> <li>➤ Understand and implement Graph theory.</li> <li>➤ Understand and implement the Algebra of Logic.</li> </ul>  |
|        | Computer Fundamentals (BCA-102)         | Upon completion of this course, students will be able to: <ul style="list-style-type: none"> <li>➤ Convert between different number systems and describe some different codes.</li> <li>➤ Understand the functions of basic digital combinatorial circuits and sequential circuits.</li> <li>➤ Understand basic computer hardware architecture &amp; be able to design fundamental logic Circuits.</li> <li>➤ Learn essential IT support skills including installing, configuring, securing and Troubleshooting operating systems and hardware.</li> <li>➤ Understand the fundamental hardware components that make up a computer's hardware And the role of each of these components.</li> <li>➤ Understand the role of CPU and its components.</li> <li>➤ Gain hands-on experience of working in Microsoft products such as: MS-Word, MS-Excel, MS-Access And MS-PowerPoint.</li> </ul> |
|        | Programming in C Language (BCA-103)     | Upon completion of this course, students will be able to: <ul style="list-style-type: none"> <li>➤ Enhance their programming skills.</li> <li>➤ Learn how to apply logic for problems.</li> <li>➤ Learn how to create pictorial representations of the program.</li> <li>➤ Learn how to build by the algorithms for problems.</li> <li>➤ Learn about Loops, Conditional statements, Array, Pointers, File Handling, Structure, Unions etc.</li> </ul>   |
|        | PC Software and Multimedia (BCA-104)    | Upon completion of this course, students will be able to: <ul style="list-style-type: none"> <li>➤ Gain hands-on experience of working in Microsoft products such as: MS-Word, MS-Excel, MS-Access And MS-PowerPoint.</li> <li>➤ Learn and implement basics of Multimedia &amp; Animation.</li> <li>➤ Learn basics of Computer Graphics.</li> <li>➤ Learn and understand Digital audio, Digital video, animation and Special Effects.</li> <li>➤ Learn and implement Text editing, Image editing etc.</li> </ul>  |
|        | Web Technology and E-Commerce (BCA-105) | Upon completion of this course, students will be able to: <ul style="list-style-type: none"> <li>➤ To develop Webpages, Static Websites, Dynamic Websites.</li> <li>➤ To use ASP as Server Side Scripting Language.</li> <li>➤ To use PHP as Server Side Scripting Language.</li> <li>➤ To use JSP, JavaScript.</li> <li>➤ To understand database</li> </ul>  |

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|---------------|---|--|
|               | <p>Communication Skills (BCA-106)</p>               | <p>On completion of the course the student should be able to:</p> <ul style="list-style-type: none"> <li>➤ Develop the student's ability to use English language accurately and effectively by enhancing their communication skills</li> <li>➤ Distinguish different communication process and its practical application</li> <li>➤ Mastering the art of a professional business presentation</li> <li>➤ More effective written communication</li> </ul>   |
|               | <p>Mathematics Bridge Course (BCA-107)</p>          | <p>Upon completion of this course, students will be able to:</p> <ul style="list-style-type: none"> <li>➤ Apply knowledge of discrete mathematics appropriate to the discipline.</li> <li>➤ Understand Statistics and its applications and also will be able to calculate Mean, median</li> <li>➤ And mode.</li> <li>➤ Analyse and solve problems based on Matrix &amp; determinants</li> </ul>  |
| <p>BCA-II</p> | <p>Calculus and Differential Equations(BCA-201)</p> | <p>Upon completion of this course, students will be able to:</p> <ul style="list-style-type: none"> <li>➤ Solve problems related to Matrix.</li> <li>➤ Solve simultaneous equations using Gauss elimination and Gauss Jordan method.</li> <li>➤ Understand the concept of Differential and Integral Calculus.</li> <li>➤ Understand the concept of Central tendency and solve problems related to Mean, Median</li> <li>➤ And Mode.</li> <li>➤ Understand the concept of deviation and solve problems related to dispersion, range,</li> <li>➤ Standard deviation, co-efficient of variation.</li> </ul>   |
|               | <p>Database Management System (BCA-202)</p>         | <p>Upon completion of this course, students will be able to:</p> <ul style="list-style-type: none"> <li>➤ Understand the importance of Database.</li> <li>➤ Understand the concept of RDBMS.</li> <li>➤ Learn brief introduction to Structured Query Language.</li> <li>➤ Understand the Architecture &amp;Modelling of Database.</li> <li>➤ Design Commercial database applications.</li> <li>➤ Learn and implement Backup and Recovery of databases.</li> <li>➤ Learn and implement the Database Security.</li> </ul>  |
|               | <p>Programming in 'C++' (BCA-203)</p>               | <p>Upon completion of this course, students will be able to:</p> <ul style="list-style-type: none"> <li>➤ Design and implement programs using C++.</li> <li>➤ Analyse a problem description, design and build object-oriented software using good</li> <li>➤ Apply C++ features to program design and implementation.</li> <li>➤ Explain object-oriented concepts and describe how they are supported by C++ including</li> <li>➤ Coding practices and techniques.</li> <li>➤ Implement an achievable practical application and analyse issues related to object-oriented</li> <li>➤ Identifying the features and peculiarities of the C++ programming language.</li> <li>➤ Use C++ to demonstrate practical experience in developing object-oriented solutions.</li> <li>➤ Techniques in the C++ programming language.</li> </ul> |
|               | <p>Computer Networks(BCA-</p>                       | <p>Upon completion of this course, students will be able to:</p> <ul style="list-style-type: none"> <li>➤ Understand the data communication concepts.</li> </ul>   |

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| 204)                                 | <ul style="list-style-type: none"> <li>➤ Understand the concept of Communication channel.</li> <li>➤ Understand the various layers of Network architecture.</li> <li>➤ Understand and implement the switching techniques.</li> <li>➤ Learn to configure the network devices.</li> <li>➤ Learn about IP -Addressing.</li> <li>➤ Learn about Network Security.</li> <li>➤ Understand how the data is transmitted wirelessly.</li> <li>➤ Learn the need to create a Network.</li> <li>➤ Learn about different layers and protocols present in those layers.</li> </ul>        |
| Operating System with Linux(BCA-205) | <p>Upon completion of this course, students will be able to:</p> <ul style="list-style-type: none"> <li>➤ Understand process management, concurrent processes and threads, memory management,</li> <li>➤ Virtual memory concepts, deadlocks.</li> <li>➤ Gain extensive knowledge on principles and modules of operating systems.</li> <li>➤ Understand key mechanisms in design of operating systems modules.</li> <li>➤ Compare performance of processor scheduling algorithms - produce algorithmic solutions</li> <li>➤ To process synchronization problems.</li> </ul> |
| Foundation Course(BCA-206)           | <p>Upon successful completion of the course, a student will be able:</p> <ul style="list-style-type: none"> <li>➤ To enable the learners to revalue literature as cultural and communicative events.</li> <li>➤ To sensitize students to the aesthetic, cultural and social aspects of literature.</li> <li>➤ To develop in the learners an appreciation of the subtle nuances of literary expression.</li> <li>➤ To improve the learners' use of language as a means of subjective expression.</li> </ul>   |

# Department of Commerce

## B.Com – 3 years Undergraduate program

### **Course 1: Financial Accounting**

CO1. The students after the completion of this course will be able to impart the knowledge of various accounting concepts.

CO2. The students after the completion of this course will be able to instill the knowledge about accounting procedures, methods and techniques.

### **Course 2: Business Communication**

CO1. The students after the completion of this course will be able to understand the concept, process and importance of communication.

CO2. The students after the completion of this course will be able to develop awareness regarding new trends in business communication.

CO3. The students after the completion of this course will be able to recognize various media of communication.

### **Course 3: Business Mathematics**

CO1. The students after the completion of this course will be able to prepare for competitive exams.

CO2. The students after the completion of this course will be able to improve their calculating power & skills.

CO3. The students after the completion of this course will be able to understand the concept of simple interest, compound interest, ratio, proportion, average and percentage etc.

### **Course 4: Business Regulatory Framework**

CO1. The students after the completion of this course will be acquainted with the basic concepts, terms & Provisions of mercantile & Business Laws.

CO2. The students after the completion of this course will be able to develop the awareness regarding laws affecting business, trade & commerce and consumer awareness.

### **Course 5: Business Environment**

CO1. The students after the completion of this course will become aware about the Business Environment.

CO2. The students after the completion of this course will be able to know the issues in the business at national and international level in the light of the LPG.

CO3. The students after the completion of this course will be able to motivate themselves for taking up entrepreneurship as career.

### **Course 6: Business Economics**

CO1. The students after the completion of this course will be able to use various economic theories.

CO2. The students after the completion of this course will be able to apply economic reasoning to problems of business.

CO3. The students after the completion of this course will be able to understand the basic micro economic concepts.

### **Course 7: Corporate Accounting**

CO1. The students after the completion of this course will be enabled to develop awareness about corporate accounting with the provisions of companies Act & Accounting as per Indian Accounting standards.

CO2. The students after the completion of this course will be enabled to develop conceptual aspect of corporate accounting & develop skills about accounting standards.

### **Course 8: Company Law**

CO1. The students after the completion of this course will be able to impart the knowledge of fundamental law of company Act 2013.

CO2. The students after the completion of this course will be able to update the knowledge of provisions of the companies Act of 2013.

### **Course 9: Cost Accounting**

CO1. The students after the completion of this course will be enabled with the knowledge of Basic cost concepts, Elements of cost, Ascertainment of materials & costing.

CO2. The students after the completion of this course will be able to understand various methods of costing & their applications in different sectors engaged in production and service.

### **Course 10: Principles of Business Management**

CO1. The students after the completion of this course will be able to understand about business management concept.

CO2. The students after the completion of this course will be able to understand about various functions of business management.

### **Course 11: Business Statistics**

CO1. The students after the completion of this course will be able to understand & apply the concepts of mean, mode & median.

CO2. The students after the completion of this course will be able to apply various methods of sampling & probability measurement.

### **Course 12: Fundamentals of Entrepreneurship**

CO1. The students after the completion of this course will be able to create entrepreneurial temper.

CO2. The students after the completion of this course will be able to take up the cause of entrepreneurship.

### **Course 13: Income Tax**

CO1. The students after the completion of this course will be able to understand the basic concept & acquire knowledge about computation of Income.

CO2. The students after the completion of this course will be enabled to submit Income Tax Returns, Advance Tax & Tax deducted at source

CO3. The students after the completion of this course will be able to identify the procedures of Tax collection authorities under Income Tax Act.

### **Course 14: Auditing**

CO1. The students after the completion of this course will be able to acquaint themselves about concept & principles of Auditing, Audit process, Assurance standards & Tax Audit and Audit of computerized system.

CO2. The students after the completion of this course will be able to prepare Audit Reports.

### **Course 15: Indirect Taxes with GST**

CO1. The students after the completion of this course will be able to understand and apply the concept of GST.

CO2. The students after the completion of this course will be able to understand and apply the concept of Excise duty, CENVAT.

CO3. The students after the completion of this course will be able to understand and apply the knowledge of Registration under GST including its procedures & the liable person for GST registration.

### **Course 16: Management Accounting**

CO1. The students after the completion of this course will be able to understand and apply the basic knowledge of accounting & techniques for management.

CO2. The students after the completion of this course will be able to understand and apply managerial behavior & control structures prevalent under varied business environment.

### **Course 16: Principles of Marketing**

CO1. The students after the completion of this course will be able to ascertain the applicability of certain principle techniques and fundamentals of marketing.

CO2. The students after the completion of this course will be able to analyze product life-aide.

CO3. The students after the completion of this course will be able to familiarize with the significance & contribution of marketing to the business enterprise.

### **Course 19: International Marketing**

CO1. The students after the completion of this course will be able to ascertain the applicability of concepts of EXIM policy, International transport system & International product life cycle.

CO2. The students after the completion of this course will be able to apply & promote themselves for employment as well as self employment in international businesses dealing with variety of innovative products & services.

### **Course 20: Financial Management**

CO1. The students after the completion of this course will be able to understand and apply the conceptual framework of financial management.

CO2. The students after the completion of this course will be able to understand and apply the theories, methods which increases the wealth of the investors and the business concern.

### **Course 21: Financial Market Operations**

CO1. The students after the completion of this course will be able to understand the working culture of the financial markets in India.

CO2. The students after the completion of this course will be able to understand the SEBI rules and regulations for both investors and company.

CO3. The students after the completion of this course will be able to understand role of brokers, jobbers and merchant banking in Indian Financial Market.

## M.Com. – 2 Year Postgraduate programme

### Course Outcomes

#### **Course 1: Managerial Economics**

CO1. The students after the completion of this course will be able to comprehend with the basic concepts, terms & provisions of managerial economics.

CO2. The students after the completion of this course will be able to determine the prices under different market forms.

CO3. The students after the completion of this course will be able to comprehend with the concepts of inflation, slowdown, deflation, stagflation and recession in an economy.

#### **Course 2: Advance Accounting**

CO1. The students after the completion of this course will be able to comprehend with the basic accounting structure of companies.

CO2. The students after the completion of this course will be able to find out how a company can dissolve by liquidating its assets or through bankruptcy and insolvency.

CO3. The students after the completion of this course will be able to comprehend with the viable and operational accounting format of companies.

#### **Course 3: Management Accounting**

CO1. The students after the completion of this course will be able to get acquainted with a separate branch of accounting.

CO2. The students after the completion of this course will be able to analyze the management accounting and its relevance in a business organization.

CO3. The students after the completion of this course will be able to familiarize with the management control system.

CO4. The students after the completion of this course will be able to fulfill the requirements of management sense and responsibilities.

#### **Course 4: Statistical Analysis**

CO1. The students after the completion of this course will be able to independently calculate basic statistical parameters applied in commerce and accounting.

CO2. The students after the completion of this course will be able to comprehend probability theory and probability distributions in relation to general statistical analysis done in commerce and accounting.

#### **Course 5: Corporate Legal Framework**

CO1. The students after the completion of this course will be able to to Provisions of various laws influencing business operations.

CO2. The students after the completion of this course will be able to comprehend the use of M/A and prospectus in a company of commerce and accounting.

CO3. The students after the completion of this course will be able to get acquainted with the negotiable instruments (Cheque, Holder and Holder in due course).

### **Course 6: Business Economics**

CO1. The students after the completion of this course will be able develop managerial , perspective to economic fundamental as aids to decision making under given environment.

CO2. The students after the completion of this course will be able to comprehend the factors in commerce and accounty that contribute to and detract from long-term economic growth and business cycle.

### **Course 7: Specialized Accounting**

CO1. The students after the completion of this course will be able to ascertain the knowledge of Banking and insurance companies accounts.

CO2. The students after the completion of this course will be able to comprehend the systems of double account system and maintenance accounts.

CO3. The students after the completion of this course will be able to get acquainted with the basic concepts of royalty and Investments account.

### **Course 8: Accounting For Managerial Decisions**

CO1. The students after the completion of this course will be able to ascertain the applicability of certain techniques of management i.e. – Target costing .

CO2. The students after the completion of this course will be able to analyze the essentials of capital budgeting and use different techniques of capital budgeting.

CO3. The students after the completion of this course will be able to familiarize with contemporary issues in management.

CO4. The students after the completion of this course will be able to fulfill the requirements of accounting management sense and responsibilities.

### **Course 9: Advanced Statistics**

CO1. The students after the completion of this course will be able to ascertain the concepts of the statistical decision theory & statistical estimations in commerce and accounting.

CO2. The students after the completion of this course will be able to comprehend the provisions of statistical quality control & the procedures of sampling methods in commerce and accounting.

CO3. The students after the completion of this course will be able to interpret the meaning of the calculated statistical indicators in commerce and accounting.

### **Course 10: Business Law**

CO1. The students after the completion of this course will be able to ascertain the consumer rights under consumer protection Act 1986.

CO2. The students after the completion of this course will be able to comprehend the international trade concepts used in global market decisions.

CO3. The students after the completion of this course will be able to comprehend and interpret the legal environments for security markets.

### **Course 11: Management Concept**

CO1. The students after the completion of this course will be able to ascertain the objectives of managerial reporting.

CO2. The students after the completion of this course will be able to fulfill the reporting requirements at different levels of management.



CO3. The students after the completion of this course will be able to get acquainted with the objectives of managerial reporting and reporting requirements.

CO4. The students after the completion of this course will be able to comprehend and interpret the requirements of management.

### **Course 12: Organizational Behavior**

CO1. The students after the completion of this course will be able to develop an understanding regarding the role of leaders in decision making process.

CO2. The students after the completion of this course will be able to fulfill the requirements of communication skills at different levels of leadership.

CO3. The students after the completion of this course will be able to analyze the challenges and opportunities in the field of organizational behavior.

### **Course 13: Advance Cost Accounting**

CO1. The students after the completion of this course will be able to develop the impact knowledge of basic cost concepts, elements of cost, ascertainment of materials and labor cost.

CO2. The students after the completion of this course will be able to analyze the various methods of costing and their applications.

CO3. The students after the completion of this course will be able to determine various levels of material cost i.e. – reorder level, minimum level, EOQ for managing working capital.

### **Course 14: Income Tax Law and Account**

CO1. The students after the completion of this course will be able to compute total income and define tax compliances & strictures.

CO2. The students after the completion of this course will be able to file IT return on individual basis.

CO3. The students after the completion of this course will be able to comprehend with the amendments made from time to time in finance Act.

### **Course 15: Tax Planning and Management**

CO1. The students after the completion of this course will be able to ascertain the concepts of TDS and advance payment of tax.

CO2. The students after the completion of this course will be able to comprehend the provisions of various taxes rebates & reliefs and procedure to file IT return.

CO3. The students after the completion of this course will be able to get acquainted with the concept of recovery and refund of tax.

### **Course 16: Principles of Marketing**

CO1. The students after the completion of this course will be able to ascertain the applicability of certain principle techniques and fundamentals of marketing.

CO2. The students after the completion of this course will be able to analyze product life-aide.

CO3. The students after the completion of this course will be able to familiarize with the significance & contribution of marketing to the business enterprise.

### **Course 17: Advertising and Sales Management**

CO1. The students after the completion of this course will be able to ascertain the applicability of concepts of advertising, media of advertising & its influence on buying habits of consumers.

CO2. The students after the completion of this course will be able to promote sales by applying the methods and techniques of sales promotion.

### **Course 18: Marketing Research**

CO1. The students after the completion of this course will be able to ascertain the applicability of concepts of marketing research.

CO2. The students after the completion of this course will be able to apply & promote marketing research procedures, methods & techniques.

CO3. The students after the completion of this course will be able to ascertain the significance, importance and requirements for introduction of new products and new markets.

### **Course 19: International Marketing**

CO1. The students after the completion of this course will be able to ascertain the applicability of concepts of EXIM policy, International transport system & International product life cycle.

CO2. The students after the completion of this course will be able to apply & promote themselves for employment as well as self employment in international businesses dealing with variety of innovative products & services.

### **Course 20: Project Work**

CO1. The students after the completion of this course will be able to ascertain the applicability of concepts of Research and Research Methodology.

CO2. The students after the completion of this course will be able to represent data in tabular and graphic manner for convenient interpretation.

CO3. The students after the completion of this course will be able to familiarize with Research and Research problems.

CO4. The students after the completion of this course will be able to develop skills to write Research papers.

CO5. The students after the completion of this course will be able to comprehend and apply the quantitative methods of Research.

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