**PROGRAMME OUTCOMES (POs), PROGRAMME SPECFIC OUTCOMES (PSOs) AND COURSE OUTCOMES (Cos)**

**AQAR 2020-21**

**Govt. Autonomous College, Phulbani**

# PROGRAMME - BACHELOR OF ARTS (B.A.)

**Programme Outcomes**

Student seeking admission for B.A. programme is expected to imbue with following quality which help them in their future life to achieve the expected goals.

1. Realization of human values.
2. Sense of social service and social responsibility.
3. Responsible and dutiful citizen.
4. Critical temper
5. Creative ability.
6. Competitive sprit to achieve ultimate goal in life.

**DEPARTMENT OF ANTHROPOLOGY**

**Programme Specfic Outcomes**

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| **After completion of B.A. Anthropology Honours Course, the students will have knowledge about the following:** 1. Physical Anthropology examines human as an organism and explains human origin, human evolution, human differentiation and human variation as influenced by heredity and environment.
2. Cultural anthropologists are particularly well suited to work in professions involving people, such as teaching, law, medicine, social work, and journalism.
3. Archaeology majors may become cultural resource management specialists.
4. Museums are yet another potent source of employment.
5. In Odisha four to Five colleges in the state are offering Anthropology in the Degree Curriculum for which the demand of the subject is very high for students in Govt. Auto. College, Phulbani & more numbers of students pursue their higher education at University level facilitating better employment for future lively hood of individuals. &the college feels proud of Anthropology.
6. Forensic Anthropology provide fundamental skills and knowledge to study human remains for medicological purposes including establishing identity and using of different anthropological methods and techniques for crimes and criminal investigation.
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**DEPARTMENT OF ENGLISH**

**Programme Specific Outcomes**

The Department of English, Govt. Auto. College, Phulbani strives to make the honours and non-honours students familiar with a variety of literatures, fundamental language skills as well as skills pertaining to Communicative English thereby prepares them to face the challenges in their life.

The Honours course has been designed to acquaint the undergraduate students with British Literature, American Literature, Indian and European Classical Literature, Colonial and Postcolonial Literature, World Literature, Popular Literature, Partition Literature, Women’s Writings and various concepts and practices relating to Literary Criticism and Theory.

General Elective courses (Academic Writing and Composition & Language and Linguistics), AECC (ALTERNATIVE ENGLISH) and AEEC (Communicative English) have been designed for non-honours students with an aim to provide basic knowledge about English language keeping the four fundamental of language learning skills in mind.

The above-mentioned courses would inculcate an interest in the students for literature, sharpen their understanding of various cultures, make them sensitive human beings and at the same time prepare them for different jobs.

**Course Outcomes**

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| **After completion of B.A. English Honours Course, the students will be able to** 1. Get an exposure to the British English Literature (Poetry, Drama, Fiction and Non-Fiction) starting from 14th century to 20th century. [C-1.1, 1.2, 2.1, 3.1, 3.2, 3.3]
2. Get an exposure to the American Literature (Poetry, Drama, Fiction and Non-Fiction).[C-4.1]
3. Get an exposure to the European Classical Literature (Poetry, Drama And , Criticism) [C-4.2]
4. Get an exposure to the Indian Writings in English (Poetry, Drama, Fiction and Non-Fiction).[C-2.2]
5. Get an exposure to the Literary criticism and theory (From Aristotle to Post Modern Period ). [C-3.1, 3.2, 3.3, 4.2, 5.2, DSE-5.3]
6. Get an exposure to the Women’s Writings (Poetry, Drama, Fiction and Non-Fiction). [C-4.3]
7. Get an exposure to the Postcolonial Literature. [C-6.1]
8. Get an exposure to the Popular Literature. [C-6.2]
9. Get an exposure to the World Literature. [DSE-5.4]
10. Get an exposure to the Partition Literature. [DSE-6.3]
11. Get an exposure to the Writing for Mass Media.[DSE-6.4]
12. Learn how to prepare student project papers on various topics.[DSE-6.4]

**Besides, students of English Elective Course can acquire knowledge about** 1. Academic Writing and Composition.[GE-1.3]
2. Language and Linguistics. [GE-3.4]

**Moreover, students of all streams develop an awareness about** 1. Fundamental Skills for language learning such as LSRW [AECC-1.4 &2.4]
2. Communicative English. [AEEC-3.5, 4.5]
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**DEPARTMENT OF ECONOMICS**

**Programme Specific Outcomes**

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| **After completion of B.A. Economics Honours Course, the students will have knowledge about the following:** 1. Understand how different degrees of competition operate in a market that affect pricing and output.
2. Understand the efficiency and equity implications of market interference, including government policy.
3. Develop research knowledge in economics.
4. Develop the skill of data collection & use of sampling techniques in research.
5. Develop the knowledge about theories of economic growth & development and issues of economic planning.
6. Create awareness about changing macro-economic policies and theories.
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**DEPARTMENT OF GEOGRAPHY**

**Programme Specific Outcomes**

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| **After completion of B.A. Geography Honours Course, the students will be able to**1. Serve as a Geographer
2. Work as a teacher in schools and high schools
3. Serve as conservator in forest, Soil, Agriculture, Departments.
4. Work in disaster and water resources management.
5. Serve in cartographer in map making divisions of Government.
6. Work in NGOs.
7. Can Prepare for Competitive state and national level exams.
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**DEPARTMENT OF HISTORY**

**Programme Specific Outcomes**

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| **After completion of B.A. History Honours Course, the students will have knowledge about the following:** 1. Students will be able to apply historical methods to evaluate critically the record of the past. Research method and communication skill will be developed.
2. They will learn to organize and express their thoughts more coherently and appropriately. As the subject history has its own value in society and human life, it will help the students to develop their ethical and social values. The knowledge about the heritage and tradition will be the most learning outcomes of the students.
3. A history graduate can find employment with Archaeological Survey of India or with private firms related to archaeology or work as a curator.
4. For History graduates, the option of public service is always open.
5. Work as a teacher in schools and high schools.
6. Serve as conservator and tourist guide in historical monuments.
7. NGOs and Social Welfare Organizations also employ BA History graduates.
8. Writer/Subject Matter Expert.
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**DEPARTMENT OF ODIA**

**Programme Specific Outcomes**

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| 1. After the completion of the course, students will acquire comprehensive knowledge of Odia literature of ancient, medieval and modern periods and especially in canonical topics like writings of Sarala Das and those of the Panchasakhas.
2. Besides, they will also become aware of crucial areas like folk literature, comparative literature and translation. Owing to our holistic approach, literary text share taught in correlation with the cultural traditions of Odisha, such as Jagannath culture.
3. The programme enables perusal of Odia literature while drawing connections with larger Indian literary cultures and trends, especially contemporary ones.
4. Thus the programme encourages students to identify and acknowledge the specialty of literature in their mother tongue while keeping the idea of national integration in mind.
5. Work as a teacher in schools, colleges and universities.
6. As odia language is mandatory up to standard – VII, it will help other students besides odia speaking students to learn and gather about knowledge in odia language.

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**DEPARTMENT OF PHILOSOPHY**

**Program Specific Objectives and Outcomes**

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|  Philosophy is a critical thinking. A study of philosophy will help us to develop critical thinking skills**.** Philosophy is important to understand and live in the world rationally. Being a student of philosophy they develop critical thinking and the skill of analyzing different concepts. It enable them to understand and fulfill the moral, social and political responsibilities as a member of the society. At the same time the students also understand the need of thinking beyond a particular religious tradition to which they are born and practice. They are able to broaden their approach towards others religions; Right/Ideal attitude towards other religion is also developed. The students of philosophy will make use of key concepts of critical thinking from western as well as Indian point of view. . After completion of B.A in Philosophy Honours course, the students will be able to understand and discuss major philosophical problems in the Indian as well as Western tradition. They also will be able to assess arguments and philosophical perspectives using critical reasoning and can also express complex thoughts logically & coherently. The study of Logical reasoning will enable the students to solve the problems related to Verbal and Non-verbal reasoning correctly. They can also identify premises and conclusions in both formal as well as informal proofs and demonstrate an awareness of limits of deductive forms as well as linguistic ambiguities. They can argue more cogently and write more effectively & efficiently. After completion of B.A Philosophy honours course, the students will be able to demonstrate understanding of major ethical theories and problems in the Western as well as Indian traditions. They also will be able to apply knowledge of ethical perspectives, theories & critical reasoning in practical life. By studying classical texts & contemporary problems, B.A Philosophy honours students learn how to construct powerful arguments while pondering over some of the deepest questions in human life:  Students in the B.A Philosophy honours course will be able to learn how to explore answers to these fundamental questions by debating and defending complex ideas & arguments & express their beliefs with clarity & precision. They will also develop sensitivity to the assumptions that underlie our factual & evaluative judgments and become careful and critical readers, writers, listeners & thinkers. They can also live a thoughtful & productive life. Apart from that a student of Philosophy can able to understand the True meaning of life, the importance of Ethical and Moral values, importance of rationality and reason in decision making process, the true nature of self, the classical and modern texts of east and west. **Course Outcomes**

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| **C-1.1: General Philosophy:** This course is designed to expose the students to the general philosophy. Which is explained the basic concept and problems of philosophy.**C-1.2: Logic & Scientific Method**: This course provides the logical principles to make proper arguments. There different scientific methods are procedures are includes in this course.**C-2.1: Systems of Indian Philosophy (I)** : This course is concerned with the different views of traditional Indian philosophical school. It is concerned with the orthodox and heterodox school, the theory of causation, liberation, law of karma, epistemology, metaphysics, and soul theory.**C-2.2: Introduction to Symbolic logic**: This course designed to provide Modern techniques which were help to proof different types of arguments.**C-3.1: Systems of Indian Philosophy(II)**: This course introduces the Indian Philosophical theory of Brahman, Atman, Jiva, Isvara, Liberation, Maya & etc. This course discuses Pramanas of Nyāya Philosophy, the seven categories of Vaisesika. It also provides the concept of Upanisadic Philosophy.**C-3.2: Ethics:** This course introduces ethical principles and concepts which will develops moral thinking .It also provides the relation of ethics with Sociology, Politics the relation of ethics with sociology, politics and Religion. It is also discuss various punishment theories to students.**C-3.3: History of Greek Philosophy**: The objective of this course is to provide the origin and development of the Philosophy on the Greek sphere. The Pre-Socratic, Platonic and Aristotelian conception of epistemology, ethics, causation, theory of ideas, theory of forms and matters and etc in Greek philosophy.**C-4.1: Contemporary Indian Philosophy**: This course is emphasizing on the Modern Indian philosophical concepts. The philosophical doctrines of the contemporary Indian philosophers like Gandhi, Tagore, Sri Aurovindo, Radhakrishnan, Ambedkar,J Krishna Murty etc are included in this paper.**C-4.2: History of modern European Philosophy**: This course introduces some basic concept of the Western Philosophy. This is emphasizing on the theory of Substance, the sources of knowledge, reconciliation between Empiricism and Rationalism, space and time and etc.**C-4.3: Philosophy of Language**:This objective of this course is that it helps to improve the understanding of the word meaning and sentence meaning. This course provides the concepts truth, analytic-synthetic, apriori-aposteriori difference.**C-5.1: Study of Western Classic (Mediations of Rene Descartes):**This course is completely based on Rene Descartes’s six mediations. This is based on the concepts of mind and body, primary and secondary quality, existence of God, will, intellect, theory of ideas, clear and distinct perceptions and etc.**C-5.2: Isa Upanisads with Sankara’s Commentary**:This course is based on the one of the Upanisad among the ten Upanisads. This course will help the student to know how to give a commentary on the verses Upanisad after knowing the Sankara’s comenatry. **C-6.1: Social and Political Philosophy**: This course will enhance the knowledge of the students regarding the philosophy thought over the society and politics. This course discusses political Ideals, justice, liberty and equality. It also provides the origin and development and human rights.**C-6.2: Applied Ethics:** This course is an application of Ethical and moral Principles to the practical fields to obtain some results for day to day issues related to the meaning of human and animal living, environment, Business and professional field.  |

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**DEPARTMENT OF POLITICAL SCIENCE**

**Programme Specific Outcomes and Objective**

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| **After completion of B.A. Political Science Honours Course, the students will be able to** **Objectives**1. Educat students in both the artistry and utility of the political science subject is the study of theoretically of government and contemporary global world.
2. Provide students with the critical faculties necessary in an academic environment, on the job an increasingly complex, interdependent world
3. Graduate students who are capable of performing research and project work which is helpful for higher studies.
4. Assist students in the development of intellectual flexibility, creativity and cultural so that they may engage in life long learning

**Programme Specific Outcomes**1. To serve as a civil servant.
2. To be serve as a good politician.
3. To serve as a social worker.
4. To be work as a social researcher.
5. Can be admitted to MA political science, LLB,MSW,MBA

**Course Outcomes**

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| 1. After the study of C 1.1 The students have some idea of political theory, its history and approaches and an assessment of its critical and contemporary trends through reflections on the ideas and practices related to democracy.
2. students have acknowlege and acquaints with the constitutional design of state structures and institutions, territorial decentralization, strong union which shows how these have played out in political practices.(C1.2)
3. they familiarize some political issues which played significant role in society .after the study of (C 2.1& 2.2) the understanding level will be developed how to tackle the issues.
4. Students be able to compare the different countrys constitution . (C 3.1&4.1) after completed the course it explores some recent trends like feminism, ecological conservation and how the call for greater democratization is restructuring public admistration.(C3.2&4.2)
5. Students be able to know different theories in international relations. Students are learn about the key milestone in world history. (C3.3&4.3)
6. They have some depth knowledge about the different western & indian political philosophy.(C -5.1 ,C- 5.2,C- 6.1,C- 6.2)
7. It is important for the students debate on human rights have taken froms historical and contemporary world (DSE-5.3).
8. the students be able to know the condition , context & forms the political development paradisms and they are bearing on the retrieval democratic voice of the citizen.(DSE-5.4)
9. the major objectives of study about the foreign policy for the students have domestic sources and structural constraints on the genesis, evolution & practice of Indian foreign policy (DSE 6.3)
10. for the completion of the study on the concept of women empowerment and gender issues they have some knowledge and create awareness among the youth people . (DSE 6.4)
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**DEPARTMENT OF BCA**

**Program Outcomes**

1. BCA course strives to create outstanding computer professionals with ethical and human values to reshape the nation’s destiny. This program aims to prepare young minds for the challenging opportunities in the IT industry, nourished and supported by experts in the fields.
2. The BCA Course aims at inculcating essential skills as demanded by the global software industry through interactive learning process. This also includes team-building skills, audio- visual presentations and personality development programs.
3. The program enhances analytical, managerial and communication skill besides inculcating the virtues of self-study. The Curriculum has been designed to cater to the ever changing demands of information technology along with necessary inputs from the Industry.
4. The OBJECTIVE of the course is to develop skilled manpower in the various areas of software industry and Information Technology
5. To enable students for pursuing respectable career through Self- Employment, Executive Employment, Entrepreneurship, Professional Career in the field of service sectors such as eBanking, Marketing, Investment, Insurance hospitality and other avenues.
6. To develop inter-twining competence in the field of Commerce and Management, Computing Skill and Computational tools.
7. To develop abilities for data analysis and interpretation Using ICT.
8. To develop the basic programming skills to enable students to build Utility programs.
9. To develop the foundation for higher studies in the field of Computer Application.
10. To provide specialization in Management with technical, professional and communications skills.
11. To train future industry professionals.
12. To impart comprehensive knowledge with equal emphasis on theory and practice.
13. To keep the students up-to-speed on all the latest and cutting edge technologies.

**DEPARTMENT OF BBA**

**Program Outcomes**

The Bachelor in Business Administration equips student with an understanding of the competitive environment in which private and a public sector organization operate, and provides student with the analytical and operational skills to resolve business problems in both sectors. The BBA program aims at developing a student's intellectual ability, executive personality and managerial skills through an appropriate blending of business and general education. The program assists the student in understanding and developing the unique leadership qualities required for successfully managing business functions, an organizational unit or an enterprise.

The specific objectives of the program are;

1. To prepare the students for higher studies in business at home and abroad.
2. To introduce students to a range of core business disciplines, including marketing, accounting, human resources management, internet systems and organizational behavior.
3. To provide opportunities to develop and practice professional skills essential in the workplace.
4. To prepare the Students will be armed with skills which will enable them to think critically, research and analyze information and apply it in modern business contexts.
5. To make the BBA degree is many a times referred to as the golden passport, since it gives its holder an edge in the job market by opening more doors of opportunity.
6. To meet the needs of small and medium enterprises as well as large corporations. It will give a professional qualification to those engaged in the administration and management of businesses and other organizations, including public, private and not- for-profit organizations.
7. To improve professional communication skills and soft skills of the students along with enhancing administration skills in them.
8. To help students to understand the various areas and explore various types of opportunities available in practical world of Business.

# PROGRAMME - BACHELOR OF SCIENCE (B.Sc.)

**Program Outcomes**

Students taking admission to this program of B.Sc. are expected to get equipped with following outcomes:

1. Explaining the basic scientific principles and methods .
2. Inculcating scientific thinking and awareness among the student.
3. Ability to communicate with others in regional language and in English.
4. Ability to handle the unexpected situation by critically analyzing the problem. e. Understanding the issues related to nature and environmental contexts and sustainable development.
5. To transform curriculum into outcome-oriented scenario
6. To develop the curriculum for fostering discovery-learning
7. To equip the students in solving the practical problems pertinent to India
8. To adopt recent pedagogical trends in education including e-learning, flipped class, hybrid learning and MOOCs
9. To mould responsible citizen for nation-building and transforming the country towards the future

**DEPARTMENT OF BOTANY**

**Programme Specific Outcomes**

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| Students seeking admission for BSc programme is expected to imbue with competitive and creative quality which help them to elucidate the future path and achieve the expected goal. Program of the department has been designed to facilitate the students with both theoretical and practical knowledge and to inculcate the scientific temperament in the students and outside the scientific community.**The major thrust area of department includes-**1. Students would justify with the mystery of lower & higher plants their evolution in from algae to angiosperm & also their economic and ecological importance.
2. Cell biology and genetics creates a clear vision regarding ultra structure of cell wall, cell organelles and biochemistry of cell with a comprehensive knowledge about theories laws and gene expression.
3. Molecular biology gives knowledge about chemical properties of nucleic acid and their role in living systems.
4. Student can describe morphological & reproductive characters of plant and also identified different plant families and classification with a knowledge of fruit & vegetables production technology, methods of cultivation of different flowering plants.
5. The students would understand the diversity among spermatophyte, application of Palaeobotany, types of fossils, geological time scale with a competency of statistical methods for different biological component.
6. Plant physiology provides scope for basic idea on different physiological process as photosynthesis, C3 , C4, CAM pathways, respiration, growth and developmental process in plant.
7. Ecology and bio diversity management provides a clear vision on Food chain & food web in ecosystem. Parasitology conveys the information of host-parasite interaction.
8. Biotechnology and bioinformatics clarify the information regarding the application of computer and software tools for understanding the media culture, tissue culture techniques role of microbes in agriculture etc
9. Economic botany empower the idea of students various plant products & artificial methods of plant propagation and the utilization.
10. Modern Botanical techniques and decent equipments provide a basic idea for the production of new superior crop varieties about seed germination, processing , production etc.
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**DEPARTMENT OF CHEMISTRY**

**Programme Specific Outcomes**

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| 1. Demonstrate, solve and an understanding of major concepts in all disciplines of chemistry.
2. Solve the problem and also think methodically, independently and draw a logical conclusion.
3. Employ critical thinking and the scientific knowledge to design, carry out, record and analyze the results of chemical reactions.
4. Create an awareness of the impact of chemistry on the environment, society, and development outside the scientific community.
5. Find out the green route for chemical reaction for sustainable development.
6. To inculcate the scientific temperament in the students and outside the scientific community.
7. Use modern techniques, Chemistry software.
8. Gain the knowledge of Chemistry through theory and practical’s.
9. To explain nomenclature, stereochemistry, structures, reactivity, and mechanism of the chemical reactions.
10. Identify chemical formulae and solve numerical problems.
11. Use modern chemical tools, Models, Chemdraw software, Charts and Equipments.
12. To know structure-reactivity relationship.
13. Understand good laboratory practices and safety.
14. Develop research oriented skills.
15. make aware and handle the sophisticated instruments/equipments.

**Course Outcomes**

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| **C -1.1** To study different models of atom and to understand quantum mechanical approach to atom, periodic properties of elements with reference to modern periodic table, different types of bond formation (ionic and covalent), predict geometry of covalent molecule on the basis of hybridisation and VSEPR theory, nature of bonding in metals and develop skills in titration and theory behind Acid-Base and Redox titration.**C-1.2**To understand the properties of gaseous state and liquid state of matter on the basis of Kinetic Theory, structure of different types of solid,ionic equilibrium with reference to salt hydrolysis, buffer solution and theories of acid and base, and theories of indicator and to develop skills for determination of viscosity and surface tension of liquid by using simple equipments. **C-2.1**To understand the basics of organic chemistry and stereochemistry with reference to conformational and configurational isomerism, the chemistry (preparation and properties) of alkanes , alkenes , alkynes and cycloalkanes, aromaticity and peculiar aromatic properties of related compounds and develop the skills required for separation and purification of organic compounds.**C-2.2**To understand the concepts of thermodynamics with reference to Enthalpy, Entropy, Free energy, Chemical potential, the concept of chemical equilibrium and it`s conditions and characteristics, theories relating to dilute solution and colligative properties and develop skills for use of equipments like pH meter and conductivity meter and to perform thermal experiments using calorimeter.**C-3.1**To understand the general principles of metallurgy and theories of acid and base, chemistry of s and p block elements including noble gases, preparation and properties and uses of inorganic polymers and develop skills for preparation of inorganic compounds and their characterization.**C-3.2**To understand preparation and properties of organic compounds like Alcohols, Phenols, Ethers, Epoxies, Aldehydes, Ketones and Carboxylic acids, preparation properties and synthetic application of active methylene compounds, chemistry Sulphur containing organic compounds and develop the skills for preparation of different organic molecules and their characterization.**C-3.3**To understand concepts like phase, component, degrees of freedom and phase rule. Application of phase rule to different types of system, Nernst distribution law and it`s applications, speed of reaction and factors influencing speed of reaction and mechanism of reaction with reference to catalysis, theories of reaction rate and develop the skills to study kinetics of first order reaction and determination of partition coefficient.**C-4.1**To understand the properties of transition and inner transition elements, nature of bonding in coordinate compounds ( VBT and CFT), role of metal ions in biological systems Na/K pump and toxicity of metals, the skills for preparation and characterization of some complex compounds and develop the skills of complex- metric titration. **C-4.2**To understand the chemistry of organic compounds containing Nitrogen such as: amines, diazonium salt, chemistry of poly nuclear hydrocarbons like naphthalene and anthracene , chemistry of Heterocyclic compounds likeFuran , Pyrole & Thiophene, chemistry of and alkaloids and terpinoids and develop the skills to identify unknown organic compound.**C-4.3**To understand concepts like theories of conductance and principles of electrochemistry, how to determine different physical quantities using conductance measurement methods, construction and functioning of different types of electro chemical cells and develop the skills to work with conductivity meter and potentiometer.**C-5.1**To understand the basic principles and instrumentation UV-Visible spectroscopy, IR spectroscopy and NMR spectroscopy, interpretation of spectrum in relation to the structure of organic molecule, chemistry of carbohydrates in relation to structure and properties and develop the skills to identify organic compounds including carbohydrates and also to estimate organic compounds quantitatively.**C-5.2**To understand the basis of quantum mechanics and its application to simple problems, nature of covalent bond with quantum mechanical approach, rotational spectra of linear diatomic and triatomic molecule and its applications and develop the skill of using UV –Visible spectrophotometer to solve different problems.**C-6.1**To understand structure and bonding in carbonyls and their reactions, structure some organometallic compound and their application as catalysts and develop the skills to identify the cations and anions in a salt mixture.**C-6.2**To understand the chemistry of amino acids vis-a-vis proteins in relation to the structure , physical ,chemical and biological characteristics, structure and function of enzymes , nucleic acids and lipids in relation to their biological importance, appreciate the concepts of bioenergetics and to estimate the amount of phenol and aniline by bromination method. **DSE-5.3**The mechanism of polymer material formation, Molecular weight and structure property relationship, Polymerization procedure and Zeigler Natta Catalyst, Characterization of polymer and to prepare phenol-formaldehyde resin/urea formaldehyde resin/ Nylon -6,6**DSE-5.4**To understand about some hazardous and toxic chemicals used in different industries and how to handle these chemicals, Different components of environment and the relationship between them, Different types of environmental pollution and remedies and how to determine DO in water, COD, BOD and to prepare borax/boric acid.**DSE-6.3**To understand about Silicate Industries, Fertilizers, Batteries, Surface Coatings, Alloys, Chemical Explosives and to analyse (Cu, Ni) and (Cu, Zn) in alloy, determine free acidity in ammonium sulphate fertilizer.**DSE-6.4**Learn an interdisciplinary approach to the scientific and social issues arising from pollution of **environment** and green approach for its solution, basic principles of Green Chemistry, green synthetic methods of different compounds and conduct Microwave assisted nitration of Phenols using Cu(No3)2.**DSE-6.4 : DISSERTATION / PROJECT WORK**A project work is to be carried out by the student in consultation with the teachers of the department. The report of work (dissertation) in a standard format is to be submitted and presented for evaluation.***Distribution of marks***1. Project Report/Dissertation (Proper documentation of literature, data, discussion etc. and logical flow of work undertaken): 50 Marks
2. Seminar/Presentation: 30 marks
3. Viva voce: 20 marks

***A brief Guidelines to Project Work:***1. Students shall undertake the project work (experimental/theoretical) related to any branch of chemistry/Chemical science under the guidance of teacher(s) from the department or jointly with teachers/research personnel of other institutes.1. The following activities have been outlined as guidelines (not exhaustive):
	* Physiochemical studies (pH, conductivity, turbidity, etc.) of different wetlands (ponds, lakes, river etc.)
	* Analysis of iron in pond / tube well / river water.
	* Analysis of Hardness of water samples.
	* Adulteration detection activities in food stuff and other edible items.
	* Extraction and preliminary characterization of useful chemicals (as far as possible) from plants.
	* Solubility, surface tension, and viscosity measurements of some solution of practical relevance, (cough syrup, soap solution, pesticides, fertilizers.. etc.)
	* Pollution related activities (Industrial/Agricultural/Municipal etc.)
	* Nutrition related activities, (essential metal detection in food, cereals, pulses, fruits etc.).
	* Small synthetical work (inorganic/Organic/Polymeric compounds)
2. The UG level project work is a group activity, maximum number of students being limited to five. HOD to notify the name of teacher(s) for supervising the project work of each group. A

teacher can guide more than one group, if necessary.1. No two groups in the same institution are permitted to do project work on the same problem.
2. Each student shall prepare and submit the project report separately for evaluation. Two copies of project report are required to be submitted in bound form (spiral/paperback).
3. Ordinarily the students can avail the facilities of college laboratory and library for the purpose but for special requirements the student has to bear the expenses of the project.
4. The project report shall be divided as:

Chapter I: Introduction (Introduction on the topic, review of literature, objective and scope of the work)Chapter II: Materials and methodsChapter II: Results and discussionChapter IV: Conclusions and Scope of future studiesChapter V: References |

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**DEPARTMENT OF MATHEMATICS**

**Programme Specific Outcomes**

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| 1. Ability to understand both concrete and abstract problems.
2. Develop the mathematical logic which is very useful for solving mathematical reasoning problems.
3. Ability to make critical observations.
4. Ability to calculate and reason to design complex and critical financial models for Bank and Insurance Companies.
5. Ability to accurately organize, analyze and interpret data.
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**DEPARTMENT OF PHYSICS**

**Programme Specific Outcomes**

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| 1. To understand the basic laws and explore the fundamental concepts of physics
2. To understand the concepts and significance of the various physical phenomena.
3. To carry out experiments to understand the laws and concepts of Physics.
4. To apply the theories learnt and the skills acquired to solve real time problems.
5. To acquire a wide range of problem solving skills, both analytical and technical and to apply them.
6. To enhance the student’s academic abilities, personal qualities and transferable skills this will give them an opportunity to develop as responsible citizens.
7. To motivate the students to pursue PG courses in reputed institutions.
8. This course introduces students to the methods of experimental physics. Emphasis will be given on laboratory techniques specially the importance of accuracy of measurements.
9. Providing a hands-on learning experience such as in measuring the basic concepts in properties of matter, heat, optics, electricity and electronics.
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**DEPARTMENT OF ZOOLOGY**

**Programme Specific Outcomes**

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| Students seeking admission for BSc programme is expected to imbue with competitive and creative quality which help them to elucidate the future path and achieve the expected goal. Program of the department has been designed to facilitate the students with both theoretical and practical knowledge in different cutting edge area of biological science. **The major thrust area of department includes –**1. Information relating to each taxon of non chordates with specific features and parasitic relationship.
2. Inculcate the ecological component and sustainable management of biome. Even as an addition statistical methods entrain students for various biological equation.
3. Theories related to chordates create an evolutionary link in the minds of students.
4. Physiological process, endocrine mechanism and histological aspect can enhance the connectivity of students with real challenges in biological science.
5. Biochemistry focus on bio-molecule formation and metabolic process and the role of enzyme in cellular metabolism.
6. Cell biology and genetics provides comprehensive information about the structure and function of cell organelles and their function with gene expression.
7. Molecular biology helps to understand the roles of bio-molecules involved in of genetic expression and gene regulation at the level of transcription and translation in better way.
8. Ethology helps to get a brief idea about animal behavior with some major theories.
9. Economic zoology empower the idea of students in different fields like apiculture, sericulture, pearl culture, dairy farming etc
10. Developmental biology briefs about embryonic development that usually don’t share with any other discipline.
11. Evolutionary biology provides an expected knowledge regarding evolutionary process.
12. Immunology creates awareness among the students regarding the function of T-cell and B-cell and other immunological function and mechanism.
13. Fisheries helps the students to get an ample of knowledge about native and exotic fishes.
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**BACHELOR OF COMMERCE (B.COM)**

**Program Outcomes**

# It will equip students with knowledge and skill required for industrial employability and develop entrepreneurial ability for self employment.

**Programme Specific Outcomes**

# It will develop managerial knowledge and skill in accounting, finance, marketing, taxes and related laws with data management capability.

**MASTER DEGREE PROGRAMMES**

# Programme Outcomes

# Master of Arts (M.A.)

a. The students acquire in depth knowledge in the field of Anthropology, Economics and Political Science which make them sensitive and sensible enough to solve social, economical and political issues related to mankind.

b. The postgraduates will be acquainted with the social, economical, political and ideological thinking of their respective subjects.

c. The program also empowers the post-graduates to appear for various competitive examinations or choose any post graduate or research programme of their choice.

d. The M. A. program enables the students to acquire the knowledge with human values framing the base to deal with various problems in life with courage and humanity.

1. The students will be ignited enough through the knowledge of the special PG programme to think and act over for the solution of various issues prevailed in the human life to make this world better than ever.
2. Through the PG programme the students will come know about research in their respective subject. It may also provide the information to the students for collection of Data, enquiry, primary and secondary methods of collection of data, classification and tabulation of data.
3. Students get knowledge of various research methods and can realize the importance of research to find solutions of a specific issue.

**PG DEPARTMENT OF ANTHROPOLOGY**

**Programme Specific Outcomes**

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| **After completion of M.A. Anthropology PG Course, the students will have knowledge about the following:** 1. An understanding and appreciation of human biological, linguistic, and cultural diversity, especially those features that separate humans from other species.
2. An appreciation and awareness of the origin of both cultural and human biological diversity through time.
3. Familiarity with anthropological literature and data sources, and a knowledge of how to critically access such information.
4. Knowledge of the methodologies used to collect and assess critically anthropological data.
5. The ability to present and communicate appropriately in at least one of the sub disciplines of anthropology.
6. Knowledge as theoretical approaches to study society and culture and understanding the philosophies of various thinkers in anthropology
7. Identify and describe the complex relationship between culture and language in global
8. An understanding of different anthropological methods and techniques used in various fields of physical anthropology like cytology, forensic anthropology, medical anthropology, etc.
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**PG DEPARTMENT OF ECONOMICS**

**Programme Specific Outcomes**

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| * 1. Students analyze economic information and develop solutions to economic problems.
	2. Students recognize that although economists address economic problems with a common approach, the science is ever changing, and one’s approach must be regularly evaluated and updated.
	3. Students learn to apply methods of analysis and presentation of results that are commonly used in the profession in order to generate conclusions that are transparent and well supported by the research process.
	4. Students able to explain what is meant by economic efficiency and the mechanism by which competitive markets lead to an efficient allocation of resources.
	5. Students can discuss the costs and causes of unemployment, and assess public policies to ameliorate it.
1. To face any competitive exam like O.P.S.C., U.P.S.C., I.B.P.S., P.O., I.F.S. etc.
2. To determine economic variables including inflation, unemployment, poverty of India, G.D.P., Balance of payments using statistical methods.
3. To master the general ability of analyzing economic issues and problems.
4. To understand the behavior of financial and money markets and perform cost benefit analysis for making investment .
5. To understand the banking system of economy.
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**PG DEPARTMENT OF POLITICAL SCIENCE**

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| **Programme Specfic Outcomes*** Understanding of government institutions, electoral processes, and policies in a variety of countries around the world and the ability to compare the effectiveness or impact of various political arrangements across countries.
* Knowledge of some of the philosophical underpinnings of modern politics and government and the legal principles by which political disputes are often settled.
* Understand the changes in patterns of political behaviour, ideas and structures.
* Assess how global, national and regional developments affect polity and society.
* Develop the ability to make logical inferences about social and political issues on the basis of comparative and historical knowledge.
* Knowledge of key theories and concepts, historical developments, organizations, and modern issues in international relations

**Course Outcomes**  |

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| **C.C-I.I & 3.1 Political Theory-I & II** * To understand the nature, scope and significance of political theory.
* To appreciate the procedure of different theoretical ideas in political theory.
* To understand the various traditional and modern theories of political science.
* To evaluate the theories of origin of the state.
* Explaining the concept of Democracy, its types and theories (Elitist, Pluralist and Marxist) relating to it.
* To understand the concept of Development and various views and Perspective relating to it. Liberal, Marxist, Sustainable Development, Human Development and Gandhian Model of Development.
* Understanding basic concepts of Justice, distributive justice, multiculturalism and social justice. Explaining the nature of Third World Countries and Neo-Colonialism. Explaining the views of Andre Gunder Frank in terms of Dependency Theory.

**C.C-1.2 & 2.1 Western Political Thinkers** * To introduce the students to the Greek political tradition, specifically to the ideas of Plato and Aristotle.
* To explain the ideas of medieval and early modern political thinkers like St. Augustine and Machiavelli.
* To familiarise the students with the exponents of the Social Contract Theory- Hobbes, Locke and Rousseau.
* To help the students to develop and elaborate understanding of Marxian political thought.

**C.C-1.3 Public Administration*** To understands the basics of personnel administration- both processes and institutions.
* To explain the concepts of financial administration in the country with special reference to the process and principles of budgeting.
* To introduce the concept of development administration and to the contributions of Fred W. Riggs.
* To explain the importance of citizens and administration and introduce institutions for the redressal of public grievances- Lokpal, Lokayukta etc.

**C.C-1.4 & 2.3 International Relations*** To understand the basic concepts of International Relations and also develop a preliminary understanding of the global economy.
* Explaining the formation, charter and objectives of United Nations and its working on Millennium Development Goals.
* Evaluating the working of United Nations in resolving conflict and peacekeeping operations.
* To analyse the international security; Disarmament, Arms Control and Nuclear nonproliferation.
* This paper shall help the students to develop a deeper understanding of International Relations along with the different international organisations and stakeholders in it.

**C.C-1.5 & 2.5 Politics in India*** To understand the philosophy of Indian constitutions.
* Introducing the Indian Constitution with a focus on the evolution of it and examining the essence of the Preamble.
* To know the salient features of Indian constitution. Examining the Fundamental Rights and Duties of Indian citizens with a study of the significance and status of Directive Principles.
* Critically analyzing the important institutions of the Indian Union: the Executive: President, Prime Minister, Council of Ministers; Governor, Chief Minister and Council of Ministers; The legislature: Rajya Sabha, Lok Sabha, Speaker, Committee System, State Legislature, The Judiciary: Supreme Court and the High Court: composition and functions- Judicial Activism.

**C.C-2.4 Indian Political Thinkers*** The paper shall introduce the most prominent Indian Political Thinkers like Manu, Kautilya, Raja Ram Mohan Roy and Jyotiba Phule. It shall also explain the ideas of M N Roy, Mahatma Gandhi, Jawaharlal Nehru, B R Ambedkar and J P Narayan. The basic objective of the paper is to help the students to develop a comprehensive understanding of the basics of Indian political thought.

**C.C -2.2 & 4.2 Comparative politics & Marjor world constitution*** To introduce the students to the basics of the ideas of constitution and constitutionalism.
* To introduce the constitution of United Kingdom- British political system and the British political traditions.
* To introduce the constitution of United State of America, it’s Federal system, presidential form of government and political parties and interest groups.
* To help the students make a comparative study of the constitutions of United Kingdom and United States of America.

**C.C-3.3 & 4.1 Political Sociology*** To explain the historical of the discipline of Political Sociology and to familiarise the students with the definition, nature, subject-matter and utility of the same.
* To elaborate on the primary concepts of- political culture, socialisation and political mobility.

**C.C-3.2 & 4.4 Research Methodology in social science & project work**Knowledge Gained : About nature of social research, scientific method and its application is social science, about key contributors in the Philosophy of science Skill Acquired: To better understand issues of post structuralism and postmodernism in social research. The Course avoids methodological monism by way of emphasizing methodological pluralism and the learner gets introduced to ordering of knowledge. |

# MASTER OF SCIENCE (M.SC.)

# PROGRAMME OUTCOMES

M.Sc. degree program translates to make a significant investment in one’s professional career.

1. To the enhanced career prospects that can be gained by taking a Master of Science.
2. Valuable personal skills and fulfill a crucial prerequisite to PhD study.
3. Candidates normally have to do independent research and present a thesis as requirement for post graduation.
4. An understanding of professional, scientific temper to face any environment, ecological and job challenges in the rapid changing scenario..
5. To be a Lecturer to guide the students and the society for over all development.

**PG DEPARTMENT OF PHYSICS**

**Programme Specific Outcomes**

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| 1. The Master of Science in Physics programme provides the candidate the required knowledge, general competence, and analytical skills on an advanced level, needed in industry, consultancy, education, research or in public administration.
2. The students would gain substantial knowledge in various branches of physics: Electronics, Quantum, classical, statistical mechanics, condensed matter physics, nuclear and particle Physics.
3. Would learn use of mathematical tools in solving complex physical problems and have the solid background and experience required to model, analyze, and solve advanced problems in physics.
4. 4.Would able to apply advanced theoretical and/or experimental methods, including the use of numerical methods.
5. This course would empower the student to acquire scientific knowledge and skills and the required practical knowledge by performing experiments in general physics and electronics.
6. 6.Would also get some research oriented experience by doing theoretical and experimental projects in the last semester under the supervision of faculty.
7. The course as a whole opens up several career doors for the students interested in various areas of science and technology in private, public and government sectors.
8. Students may get job opportunities in higher education, research organizations, physics consultancy, radiology, radiation oncology and many others. Some of the institutions where physics students can start their carrier are: BARC, DRDO, NPTC, IISc, ISRO, ONGC, BHEL, PRL, NPL, SINP, VECC, IITs, NITs, IIPR,NISER,IISER etc.
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**PG DEPARTMENT OF LIFE SCIENCE**

**Programme Specific Outcomes**

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| The Department of Life Science offers two years P.G. Course in Life Science with major focus on Modern Biology. Program of the Department has been designed to facilitate the students with both theoretical and practical knowledge in different cutting edge area of biological sciences. This program translates a significant investment in one’s professional career.The major thrust area of our department includes –1. Cell biology and immunology expected to get a vivid information regarding the structure ,function and certain mechanism.
2. Genetics and bio informatics expected to aware the genetic expression and determine the function of gene and protein ,establish evolutionary significance relationship and calculate the3-d shape of protein by using computer application.
3. Biochemistry and Biophysics will make aware the students with molecular machinery of living cells and. To understand the biological system aimed of bioengineering.
4. Evolution and taxonomy will make clear conceptual knowledge regarding evolution and frame work for classifying taxon and their relationship with modern taxonomic approaches.
5. Molecular biology and genetic engineering deals with nucleic acid and protein formation and formation of bio engineered elements.
6. Ecology and conservation biology aware the students related to ecosystem and their importance and develops a compassion towards bioresources.
7. Plant diversity clarify the mystery of plant science and its application in different field of interest. Physiology provides an ample of information of different mechanism in plant.
8. Animal diversity clarify the traditional and modern taxonomic approaches.
9. Physiology and endocrinology expects from students to get basic idea about various physiological process and endocrine system.
10. Ecology and toxicology provides a basic idea about ecological components and toxic effects to bioresources.
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