Joya Gogoi College
Khumtai-785619
Golaghat (Assam)
Affiliated to Dibrugarh University

BA Honours with Assamese	
CBCS (Core Course)	
SEM-I	
Course name	**Course Outcomes**
ASSAMESE-C-I: History of Assamese literature. (From beginning to Post Sankardev's Period)	(i) Introduce different periods of Assamese literature and its evaluation. (ii) Understand and read the basic characteristics of every period of the Assamese literature from beginning to post Sankardev's period.
ASSAMESE C-2History of Assamese literature(From Arunodoi's era to Present time)	i) Introduce Assamese literature from Arunodoi to post 2nd world war period. ii) This course will help the students to examine the diversity of modern Assamese literature.
SEM-II	
ASSAMESE C-3Introduction to Linguistics	i) Learn the history of linguistic study. ii) Introduce the Methodology of studying linguistics. iii) Read key issues related to language and literature.
ASSAMESE C-4Poetics	At the completion of this course, a student will be able to i) Learn the basics theoretical knowledge of Eastern and western poetic study. ii) Learn some approaches of literary criticism namely classicism, realism and modernism. iii) Understand the literary genre like rasa,guna,sabdasakti,riti,alankara,matra.
SEM III	
ASSAMESE C-5 Literary Criticism	i) Understand the importance and nature of literary criticism and its various methods. ii) Introduce different genre of literature like poem, drama, one-act play, novel, short stories.
ASSAMESE C-6Selection from Assamese Poetry	At the completion of this course, a student will be able to i) Learn the movement and nature of Assamese poetry from beginning to modern age. ii) Read and understand some selected text of Assamese poetry.
ASSAMESE C -7: Studies on the Culture of Assam	At the completion of this course, a student will be able to: i) Know about the general concept of culture of ethnic groups and its components. ii) Understand various ethnic groups of Assam. iii) Learn the significance of Assamese culture and its component.
SEM IV	

ASSAMESE C-8:Theory and practice of Comparative Literature.	i) Provide general idea of comparative literature. ii) Introduce with world literature. iii) Understand the similarity and differences between cultures and greater appreciation for the richness and diversity of world literature. iv) Introduce the practice and relevance of comparative literature.
ASSAMESE C-9: Indo-Aryan languages and Assamese	i) Introduce evaluation of Aryan language. ii) Understand linguistic features of its different states Sanskrit,Pali,Pakrit. iii) Read selected text and identify its various linguistic features.
ASSAMESE C-10: Selection from Assamese Prose.	At the completion of this course, a student will be able to i) Know the basic idea of Assamese Prose literature. ii) Learn the origin and development of Assamese prose literature with its characteristic features. iii) Read and understand selected Assamese prose text.
SEM V	
ASSAMESE C-11: Assamese Drama.	At the completion of this course, a student will be able to I. Know about the history of Assamese drama and theatre. II. Read and interpret selected Assamese drama.
ASSAMESE C-12: Studies on Assamese linguistics	At the completion of this course, a student will be able to i) Learn the idea of Phonetics and Morphomics. ii) Know about the basic characteristics ofAssamese Phonology, Morphology and Syntax.
ASSAMESE DSE-1: Assamese Grammar, Lexicon and Idiomatic Usage	After completing this course, a student will be able to: (i) Introduce Assamese Grammar, Lexicon and Idiomatic usages. (ii) General Introduction to Assamese Dictionary
ASSAMESE DSE-2: Introduction to Indian Literature.	(i) Discuss the history of Indian literature. (ii) Understand the origin and development of Indian literature. (iii) Provide the conception of the uniqueness of many languages. (iv) Interpret various text of Indian literature.
SEM VI	
ASSAMESE C-13: Selection from Assamese prose.	After completing the course, a student will be able to I. Know about the characteristics of prose literature of modern times. II. 2.Get knowledge to interpret and understand selected Assamese prose literature of modern times.
ASSAMESE C-14: Language and script of Assam	After completing this course, a student will be able to: i) Know about different languages and dialects

	of Assam. ii) Learn characteristics and mutual exchange of Assamese and Aryan language. iii) Learn scripts used by the different languages.
ASSAMESE DSE-3:	After the end of the course, a student will be able to i) Understand the concept of world literature. ii) Read and learn the text of world literature.
ASSAMESE DSE4 (A):Special Author	After completing this course, a student will be able to i) know about the canonical works of particular author. ii)Develop critical thinking as well as interpretation of the text of the particular author. iii)Understand the socio-cultural aspects of the particular age of the author.
ASSAMESE DSE 4(B): Project	At the completion of this course, a student will be able to i)Understand the basics idea and components of research work. ii)Know about formulating hypothesis, methodology. iii)Know about the thrust area of research work.

B. Sc. Botany

CBCS (Honours)

Semester I

Course Name	**Course Outcome**
BC101T MICROBIOLOGY AND PHYCOLOGY	Through this paper students can learn about the characteristics of various forms of microbes and algae and also their economic importance.
BC102T BIOMOLECULES AND CELL BIOLOGY	Through this course students will be able to understand the structures and basic components of macromolecules, familiarize with molecular organisations and cellular and molecular processes of life.
GENERIC ELECTIVE BIODIVERSITY (MICROBES,ALGAE,FUNGI,LICHEN AND ARCHEGONIATE)	In this course students will learn about different forms of plant life, they will be familiarized with various lower plants including microorganisms.
Semester II	
BC203T MYCOLOGY AND PHYTOPATHOLOGY	The students can learn about the biodiversity of fungi, know the economic importance of fungi, understand the scope and importance of Plant Pathology and also know the control measures of plant diseases in this course.
BC204T ARCHEGONIATE	Through this course the students will be familiarized with the classification, morphology, anatomy and reproduction of different species of Bryophyte and Gymnosperms and also understand the important fossil types.

GENERIC ELECTIVE PLANT PHYSIOLOGY AND METABOLISM	In this course students will learn about the mechanism and physiology of life processes in plants, they will also learn about the various metabolic pathways leading to the formation of significant molecules and their catabolism.
Semester III	
BC305T ANATOMY OF ANGIOSPERMS	Through this course the students will learn about the internal structure and reproduction of Angiosperms, anatomical organisations of plant tissues and also on their development.
BC306T ECONOMIC BOTANY	In this course students will learn about different economically important plants and also about the plant products and their different uses.
BC307T GENETICS	The students will be familiarized with the principles of heredity and different mechanisms of inheritance through this course, also they will learn about the extra-chromosal inheritance in plant system.
GENERIC ELECTIVE PLANT ANATOMY AND EMBRYOLOGY	Through this course students will be familiarized with the various tissue systems, they will understand the normal and anomalous secondary growth , they will understand the scope and importance of Embryology.
Semester IV	
BC408T MOLECULAR BIOLOGY	Through this course the students will learn about different Biological Macromolecules and also on the various processes which are involved with these macromolecules.
BC409T PLANT ECOLOGY AND PHYTOGEOGRAPHY	In this course the students will be familiarized with interaction of different plants with its surroundings and also about the geographic distribution of different plants.
BC410T PLANT SYSTEMATICS	The students can learn about the methods of identification, classification and nomenclature of higher plants in this course.
GENERIC ELECTIVE PLANT ECOLOGY AND TAXONOMY	In this course the students will learn about the major conceptual issues and areas of plant ecology, also the students will learn about the diversity of plants, their Description, Identification, Nomenclature and Classification.
Semester V	
CORE COURSE	
BC511T REPRODUCTIVE BIOLOGY OF ANGIOSPERMS	Through this course the students will be familiarized with the different processes and mechanisms of reproduction in plants.
BC512T	In this course students will learn about the different

PLANT PHYSIOLOGY	physiological functions of plants, they will learn about the growth and development of plants, understand the different physiological details.
DSE COURSE	
BD501T ANALYTICAL TECHNIQUES IN PLANT SCIENCES	In this course students can learn about different techniques which can be used to study different Biological processes.
BD502T BIOIFORMATICS	Through this course students will be familiarized with the various applications of computational tools in solving Biological problems.
Semester VI	
CORE COURSE	
BC613T PLANT METABOLISM	In this course the students will learn about the various metabolic processes that are involved with plant life.
BC614T PLANT BIOTECHNOLOGY	Through this course students will understand the fundamentals of plant tissue culture techniques, understand the advantages of in vitro propagation.
DSE COURSE	
BD605T PLANT BREEDING	In this course students can learn about different methods of plant improvement and breeding techniques.
BD606T NATURAL RESOURCE MANAGEMENT	Through this paper students can learn about different natural resources and their management practices.

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BSc. Honours with Chemistry	
CBCS (Core Course)	
Semester-I	
Course Name	**Course Outcome**
CHEMISTRY-C-101 Inorganic Chemistry	Through this course students will gain the knowledge about the wave function and its significance, Schrodinger equation and its importance in quantum mechanics, periodicity properties of elements, atomic number, properties of elements like atomic radii, ionic radii, size effect of ionic bond, solvation energy, covalent character of ionic bond, about the concept of valence bond theory and molecular orbital theory, redox equations etc.
CHEMISTRY-C-102 Physical Chemistry	Through this course students will gain an understanding of Kinetic theory of a gas, deviation from ideal behaviour (concept of real gases) and behaviour of real gases etc. Concept of surface tension and viscosity of liquids, cleansing action of detergents. About the solid state and nature of different solid states, Bragg's equation, Miller indices, ionization of weak and strong electrolytes, solubility and solubility products etc.
Semester-II	
Course Name	**Course Outcome**
CHEMISTRY-C-201 Organic Chemistry	Through this course students will gain the knowledge of basic concept of organic chemistry such as IUPAC nomenclature, hybridization, concept of electronic effects, concept of stereochemistry, isomerism, absolute and relative configuration etc. and the idea of properties and different chemical reactions of aliphatic hydrocarbon and relative stability, Bayer's strain theory, conformational analysis of cyclic hydrocarbon etc.
CHEMISTRY-C-202 Physical Chemistry	Through this course students will learn about the concept and application of thermodynamic, calculation of thermodynamic properties, the idea of free energy change and its relation with spontaneity of reaction. They will also learn about the thermodynamic derivation of relation between Gibbs free energy and reaction quotient and concept of colligative properties and their derivation by using chemical potential etc.
Semester-III	
Course Name	**Course Outcome**
CHEMISTRY-C-301 Inorganic Chemistry	Through this course students will gain the knowledge about the different techniques of purification of metal, concept of acids and bases, properties and structural aspects of s and p-block elements, noble gases, idea of inorganic polymers etc.
CHEMISTRY-C-302 Organic Chemistry	Through this course students will gain an understanding of the prediction of organic reaction mechanism, relative reactivity of alkyl and aryl halides etc. idea about the properties and reactions of alcohols, phenols, carbonyl compounds, carboxylic acids and their derivatives etc. Preparation of sulphur containing compounds.

CHEMISTRY-C-303 Physical Chemistry	Through this course students will gain an idea about phases and phase diagrams of two component and three component systems, eutectic point, congruent and incongruent melting point, concept of degrees of freedom, order and molecularity of reaction, Steady -state approximation in reaction mechanism, types of catalysis, concept of Michaelis-Menten mechanism, adsorption and adsorption isotherm etc.
Semester-IV	
Course Name	**Course Outcome**
CHEMISTRY-C-401 Inorganic Chemistry	Through this course students will gain the concept of coordination compounds, application of Werner's theory and Crystal field theory, geometry of different coordination complexes, properties and structure of transition metals, metal ion present in biological systems and their importance, use of chelating agents in medicine etc.
CHEMISTRY-C-402 Organic Chemistry	Through this course students will gain the knowledge about preparation and properties of Aryl Amines, Heterocyclic compounds, Polynuclear hydrocarbon and methods of structure elucidation of alkaloids and terpenoids etc.
CHEMISTRY-C-403 Physical Chemistry	Through this course students will gain an understanding of conductance, application of conductance measurements, concept of strong and weak electrolytes, concept of Electrochemistry, Faraday's law, Nernst equation, EMF, basic idea of electrostatics, magnetic properties of atoms and molecules etc.
Semester-V	
Course Name	**Course Outcome**
CHEMISTRY-C-501 Organic Chemistry	Through this course students will gain an understanding of synthesis, properties and structural aspects of Nucleic acids, Amino acids, peptides and enzymes etc. They will learn about lipids, disconnection approach in organic synthesis, structure and applications of pharmaceutical compounds like antimalarial drugs, antipyretics and analgesic etc.
CHEMISTRY-C-502 Physical Chemistry	Through this course students will learn about the concept of quantum mechanics, qualitative treatment of hydrogen atom and hydrogen like ions, Schrodinger wave equation etc. They will also learn about different spectroscopic techniques and their application in prediction of structure of different inorganic and organic compounds etc.
CHEMISTRY-DSE-501 Analytical Methods in Chemistry	Through this course students will gain the knowledge of the principles and applications of different modern chemical instrumentation techniques like Spectroscopic techniques, Chromatographic techniques, Thermo gravimetric analysis, and methods of Solvent extraction which are used in field of research.
CHEMISTRY-DSE-502 Green Chemistry	Through this course students will learn about the concept of green chemistry and its principles, how to design safer chemical in laboratory, concept of atom economy, green solvents and green methods of organic synthesis etc.
Semester-VI	
CHEMISTRY-C-601 Inorganic Chemistry (Organometallic Chemistry)	Through this course students will gain the knowledge of Organometallic compounds, their properties and reactions, Zeise's salt, concept of 18 electron rule, haptacity of organic ligands. They

	will also learn about the inorganic reaction mechanism, concept of Wilkinson's catalyst and its application in industrial process like hydrogenation of alkene and structural aspects of metal carbonyl etc.
CHEMISTRY-C-602 Organic Chemistry	Through this course students will learn about the application of UV, IR, NMR spectroscopy, mass spectra in organic molecules. They will also learn about the methods of synthesis, structure and importance of carbohydrates, biodegradable polymer, dyes and applications of different dyes etc.
CHEMISTRY-DSE-602 Industrial Chemicals and Environment	Through this course students will learn about the manufacture, application, handling of different industrial gases and inorganic chemicals, different types of pollutions, their effects and the control measures, source of energy and the concept of biocatalysts etc.
CHEMISTRY-DSE-603 Dissertation	Through this course students will gain the knowledge of scientific research, how to find a literature, how to solve a scientific problem etc. They will also learn about the availability of different instrumental techniques for conducting scientific research and idea about the writing of research paper etc.
CHEMISTRY-GE-101 Atomic Structure, Bonding, General Organic Chemistry and Aliphatic Hydrocarbons	Through this course students will gain the knowledge of the concept of quantum mechanics, Schrodinger wave equation, quantum numbers, chemical bonding, general characteristics of ionic bonding, VSEPR theory, concept of Molecular orbital theory and its application for the homonuclear and heteronuclear diatomic molecule, about the fundamentals of organic chemistry, different types of electronic effects like inductive effect, electromeric effect, mesomeric effect etc. Concept of aromaticity and isomerism. They will also learn about the stereochemistry, R/S-nomenclature, cis-trans etc. They will learn about preparation, properties and reactions of aliphatic hydrocarbon etc.

Course Name	**Course Outcomes**
CHEMISTRY-GE-201 Chemical Energetics, Equilibria and Functional Organic Chemistry	Through this course students will learn about the concept of thermodynamics, variation of enthalpy with temperature-Kirchhoff's equation, Gibb's free energy, Thermodynamic derivation of law of chemical equilibrium, concept of strong and weak electrolytes, solubility and solubility product etc. They will also learn about the synthesis, properties and chemical reactions of aromatic hydrocarbon, aryl and alkyl halides, alcohols, phenols and ethers etc.
CHEMISTRY-GE-301 Solutions, Phase Equilibrium, Conductance, Electrochemistry and Functional Group Organic Chemistry-II	Through this course students will gain the knowledge of Thermodynamics of ideal solutions, partial miscibility of liquids, phases and degrees of freedom, phase diagrams of one component and two component systems, concept of conductance, application of conductometric measurements, electrochemistry, Nernst equation, EMF etc. They will also learn about the preparation, properties and chemical reactions of carboxylic acids and derivatives, amines,

	carbohydrates, amino acids, peptides and protein etc.
CHEMISTRY-GE-401 Transition metals, Coordination Chemistry, States of Matter and Chemical Kinetics	Through this course students will gain the understanding of properties transition elements, application of Valence bond theory on coordination complexes, Crystal field theory and its application for strong and weak field complexes, Jahn-Teller distortion etc. They will also learn about the kinetic theory gases, deviation from ideal behaviour, concept of real gases, properties of liquids and solids, concept of surface tension and viscosity, Bragg's law, defects in crystal system, concept of reaction rates, order and molecularity of reaction, concept of activation energy etc.

B. A Economics	
CBCS (Honours)	
Semester I	
Course Name	**Course Outcome**
ECNHC101: Introductory Microeconomics	This course helps the students to gather knowledge on the basic principles of microeconomics. It also provides students the foundation of thinking as an economist. The course content is the basis of understanding the real-life situations.
ECNHC102: Mathematical Methods for Economists-I	This course enables the students how to use mathematical techniques to analyse economic problems. Paper like microeconomic theory, econometrics, and statistics can be studied by using mathematical techniques as described in this course.
ECNGE1: Introductory Microeconomics	This course helps the students to gather knowledge on the basic principles of microeconomics. It also provides students the foundation of thinking as an economist. The course content is the basis of understanding the real-life situations.
Semester II	
ECNHC201: Introductory Macroeconomics	This course helps students to learn the basic concepts of macroeconomics pertaining to the determination and measurement of aggregate macro variables such as savings, investment, money, GDP, inflation, and the balance of payments.

ECNHC202: Mathematical Methods for Economists-II	The study of the course helps students to use mathematical techniques in some microeconomics theories, statistics and econometrics. Use of mathematical techniques to study economic theory helps students to analyse economic problems in lucid and precise manner.
ECNGE2: Introductory Macroeconomics	This course helps students to learn the basic concepts of macroeconomics pertaining to the determination and measurement of aggregate macro variables such as savings, investment, money, GDP, inflation, and the balance of payments.
Semester III	
ECNHC301: Essentials of Microeconomics	Studying this course, the students will be able to formally analyse the behaviour of individual economic agents. Students can also use the quantitative techniques to understand the basic concepts of microeconomics.
ECNHC302: Essentials of Macroeconomics	This course makes students familiar to formal model building of macroeconomic theory using analytical tools. Student can also learn various alternative theories of output and employment determination in closed economy both in the short as well as medium run and role of policy effectiveness in this context.
ECNHC303; Statistical method for economics	After going through this course, the students will be able to gather knowledge on basic concepts and terminology using
	statistical analysis and inference. Study about probability along with discrete and continuous random variable, sampling techniques, sampling distribution etc., are also introduced in this course.
ECNGE3.1: Indian Economy-I	This course helps students to review and analyse major trends in economic indicators in India, particularly during post-independence era.
ECNGE3.2: Money and financial markets	Studying this course, students can grasp knowledge on the different theories of money and financial markets. It also deals in the functioning of monetary and financial instruments as well as sectors of the economy.
Semester IV	
ECNHC401: Advanced Microeconomics	The course aims at providing conceptual clarity to students coupled with the use of mathematical tools and reasoning. It provides a fillip to understand about general equilibrium and welfare, imperfect market etc.
ECNHC402: Advanced Macroeconomics	Introducing the long run dynamic issues like development, growth and technical progress are the basic objectives of this course. This course also enlarges students' knowledgebase on the micro-foundation to the various economic aggregates.
ECNHC403: Introductory Econometrics	It comprehensible introduces students to basic econometric concepts and techniques. A few statistical concepts like hypothesis, formulation and testing, estimation and diagnostics checking of single and multiple regression model etc., also the input of this course.

ECNGE4.1: Indian economy-II	Going through this course, the students can examine sector specific policies and their impacts on the key economic indicator in India. This course also introduces students with the current economic issues in India.
ECNGE 4.3: Public Finance	Students can acquaint with the knowledge on Govt. finances with reference to India associated with the financial issues in India in its practical aspects.
Semester V	
ECNHC502: Development -I	To equip the students with knowledge of HDI in connection with poverty and inequalities in India along with respective theories and conceptual issues.
ECNHC501: Indian Economy - I	Through this course, students can acquire knowledge on the major trends in economic indicators in India in the post-independence periods. Emphasis is given on the particular importance on breaks in the trends because of policy changes.
ECNHDSE505: Money and Financial Markets	It helps students to understand the theory and working of monetary and financial sector of an economy. Different constituents of financial markets and institutions are also focused in this course. This course also highlighted the instrument of monetary control and monetary management. Reforms in the financial and monetary market along with changes in monetary policy in the post globalization period in India are also discussed at length in this course.
ECNHDSE506: Public Economics	Studying this course students can get knowledge on government policies on terms of economic efficiency and equity. Govt. intervention through public policies and its impact on allocation, distribution of public resources along with stabilization in the economic system are also focused in this course. The course simply analyses the govt. taxation and expenditure policies. Student can also acquire knowledge on public goods, market failures and externalities from this course.
Semester VI	
ECNHC601: Indian Economy- II	The course acquaints students with the tools of sector specific policies along with impact and incidents in formulating the trends in major economic indicators in India. Key emerging issues such as budgetary management, monetary policy changes by RBI etc., are also emphasized in this course content.
ECNHC602: Development Economics-II	Through this course students get room for understanding some development issues such as population growth viz-a-viz development, the meaning of demographic concepts and trends in their indices. The structure and contracts of the market is also linked to the concerns of implementation of the policy inflicting in the underdeveloped countries. It helps students to study about the governance of communities and organization associated with

	sustainable development goals. The course envisages on the role of liberation and globalization along with increased dependence for the process of development.
ECNHDSE602: Environmental Economics	Studying this course students find the economic causes of environment concerns besides meaning of some basic concepts. They also acquaint with the knowledge of economic institution, incentives and other instruments and policies which are being applied to environmental issues and measurement. It also addresses the economic implication of environmental policies in addition to valuation of environmental qualities, quantitative measurement of environmental losses, tools of environmental projects such as cost-benefit analysis and environmental impact assessment. A few global environmental problems along with activities of respective international forum are also focused in this course.
ECNHDSE604: The Economy of North-East India	This course enriches learners with the inherent and changing characteristics of the economy of North-East India. It helps students to know about the performance and challenges of different sectors of the respective economy.

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BA Honors in Education	
CBCS (Core Course)	
Semester I	
Course Name	**Course Outcomes**
EDNH101: Philosophical Foundation of Education	This Course helps students to learn the concept, aims, functions and role of education. This course enables to explain the role of philosophy in Education and also the influence of the basic tenants of the Indian and Western philosophies in Education.
EDNH102: Sociological Foundation of Education	Learning this course enables to study the concepts, approaches and theories of educational sociology. It helps the students to explain the role of education in social change and development. It also helps the students to illustrate different political ideologies and their role on education.
SEMESTER II	
EDNH201: Psychological Foundations of Education	This course design to help the students to know the concepts, nature, and scope of psychology in education. Learning this course make possible to explain the meaning, concepts, types and theories of Learning, Intelligence, Personality and Creativity and their influences in education.
EDNH202: Educational Administration and Management	With the help of the course, learners are able to explain the concepts, types and modern trends of educational management. It also enables them to define the concepts of educational leadership, educational supervision and educational planning. It also helps the students to analyze the role and importance of educational planning management, supervision and how to ensure quality in these fields.
SEMESTER III	
EDNH301: Great Educators and Educational Thoughts	This Course helps students to appraise the contribution of Indian and Western Philosophers (Shankarachaya, Yagyabalkya, Sankardeva,Rabindra Nath Tagore,Vivekananda,Plato Dewey etc) in the field of education. This course also enables the students to find out the relevance of educational thoughts of the given philosophers.
EDNH302: Educational Measurement and Evaluation.	With the help of the course, learners are able to explain the concept, types and need of measurement and evaluation in education. It helps the students to describe the meaning of psychological tests, their characteristics and process of construction. Students are also able to explain the meaning of different statistical measures and use of statistics in measurement and evaluation in education.

EDNH303: Experimental Psychology and Laboratory Practical	After the completion of the course, the learner will understand concepts, rules and procedures of experimental psychology. It also helps to explain the concept, theories and methods of memory, attention, learning, personality and intelligence and their related practical.
SEMESTER IV	
EDNH401: Education In Pre-Independent India	Students are able to know the concept of education in the scenario of Indian heritage. Students are able to acquire knowledge about the education of Ancient India, Medieval India and British period. It helps them to critically analyse the education system during these periods.
EDNH402: Part A:Techniques of Teaching	With the help of the course, learners are acquainted with the evolving concepts of teaching and learning, phases of teaching and teaching behaviour. Students are able to explain the importance of lesson plan in teaching –learning process. It helps to give them a comprehensive idea about different methods and approaches of teaching.
EDNH402: Part B: Teaching Practice	After the completion of the course, students get practical knowledge about teaching skills by demonstrating in classroom. Students will be able to integrate and incorporate the teaching skills in classroom situation by preparing lesson plan for Micro and Practice teaching.
EDNH403: Educational Technology	This course helps the students to know the concepts and nature of educational technology. Also helps to distinguish between educational technology and instructional technology. After the completion of the course students are able to apply ICT and model of teaching in teaching and learning. This course also helps to get an idea about effective communication and demonstrate the skills of effective communication.
SEM V	
EDNH501: Education in Post Independent India	This course helps to get a general outline of the educational scenario at the time of independence. To give a comprehensive idea about the status of education during post independent period with special emphasis on the commissions and committees and to acquaint with the recent educational development in India.
EDNH502: Education in world perspective	This course design to help the student to explain the meaning, nature and purpose of comparative education. This course helps to give an idea about objectives, organization, administration, vocational and teacher education of UK, USA, India and Japan.

EDNHDSE 1: Guidance and Counselling	Learning this course enable to gather knowledge about guidance and counseling, its types, characteristics, principles. This course also helps to explain the tools and techniques of guidance and counselling and organization of guidance and counselling services at Elementary,Secondary and Higher Education.
EDNHDSE2: Mental Health Education	This course design to help the student to explain the concept, criteria and history of development of mental health and hygiene. It will help the learner to get an idea about the concept of normality and abnormality, adjustment and maladjustment and adjustment process. This course also enables students to know the importance of Yoga as the scientific method for the development of personality.
SEMESTER VI	
EDUH601: Emerging Trends in Indian Education	To explain the need of constitutional provisions for education and also the challenges of Indian education at different levels. It also helps to define the new perspectives of education and also help to analyse the initiatives taken by government of India to face challenges in the new perspectives of education. This course also gives an idea about the role of international agencies in the development of education.
EDNH602: Child and Adolescent Psychology	Learning this course enables to study the significance of childhood and adolescence period and its developmental changes. It also helps to summarize the effect of family dynamics on child and adolescent development. Help to explain the significance of the role of society in the proper development of young children.
EDNHDSE3: Human Rights Education	This course enables to explain the basic concepts, theories, nature and constitutional perspectives of Human Rights. Course also helps the students to get a comprehensive idea of Human Rights Education and also explain the role of different agencies of Human Rights Education.
EDNHDSE4: Project Report	After completion of this course, the students will be able to know the process of conducting a project. Project work enables the students to develop deep content knowledge as well as critical thinking, creativity and communication skills. Learners will be able to identify the problems and solve problems faced in educational field through project. Finally, Students will be able to prepare project report.

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BA Honours with English	
CBCS (Core Course)	
Semester-I	
Course Name	**Course Outcomes**
ENGH10100: Indian Classical Literature	• The course introduces student with rich cultural heritage of Indian literature. • Provide basic characteristics and knowledge of Sanskrit literature.
ENGH10200: European Classical Literature	• After completion of the course students will be able to get the knowledge of immortal classic of European Classical Literature. • Students will be able to learn the difference between Greek classics and Latin classics. .
AECC1.1: English Communication	• After completion of the course, the students will be able to use English for effective writing and enhance their vocabulary. • The students will be able to Read and Interpret Texts written in English.

Semester-II	
ENGH20100: Indian writing in English	• The content of this course will inspire the students to study the legendary Indian writers' writings in English and their works. • The students will develop a critical thinking and interpretation of the prescribed text of Indian writing in English
ENGH20200: British poetry and drama 14th to 17th Century	• This course will acquaint the learner with canonical British poets and dramatists. • The course will help the learners to understand the text of Elizabethan periods in a proper perspective.
SEM III	
ENGH30100: American Literature	• This course will acquaint students with different important periods of American literature. • This course will introduce students with various socio-cultural context, American revolution, great depression and great American dreams.
ENGH30200: Popular literature	• After completion of the course the students will understand the concepts and trends of popular literature, such as crime thriller, graphic fiction, children's literature. • This course will help the students to acquaint themselves with crime thrillers, graphic friction and children literature. • The course will develop the knowledge and the impact of popular literature on common reader.
ENGH30300: British Poetry and Drama 17th and 18th Century	• This course will exhibit the in-depth knowledge of the history of British poetry and drama. • It will familiarize the students with socio-political and cultural historical context of England.
SEM IV	
ENGH 40100: British Literature:18th Century	• This course will inspire the students to identify and describe distinct literary characteristics of British literature in socio-cultural and historical context of England. • Analyze canonical literary works, watershed events, movements, and genres. • Acquaint students with the age of enlightment.
ENGH 40200: British Romantic Literature	• This course will develop in-depth historical knowledge of British romantic literature. • It will introduce the literary product of France

	revolution and American war of independence. • Helps the student to analyse critically the canonical works on watershed events, movements, and genres.
ENGH 40300: British Literature:19th Century	• This course will introduce extensively the knowledge of the history of the British literature of 19th Century. • Analyze the colonial literary works and its characteristics. • This course will familiarize the students with Victorian literature to evoke the notion of propriety, prudishness and censorship.
SEM V	
ENGH 50100: Women Writing	• This course will introduce women's writing. • It will acquaint how women transcends or upholds the male writing tradition through subversive ways.
ENGH 50200: British Literature: The Early 20th Century	• Introduce the British literature of the 20th Century • Familiarity with a wide range of socio-political historical context of England of the 20th Century.
ENGDSE 50120: Literature of The Indian Diaspora	• Study the experience of the Indians diaspora through the critical analysis of literature, primarily friction. • Introduce the quest for identity, uprooting, re-rooting, insider, outsider, nostalgia, sense, and guilt etc., in the diaspora context.
ENGDSE 50130: Literary Criticism	• Introduce literary criticism from the Romantic period to the present. • Understand the recent trends in criticism, particularly feminist criticism.
SEM VI	
ENGH 60100: Modern European Drama	• Introduce with modern European drama particularly 20th Century. • Understand and read the specific writing of the text in modern European context.
ENGH 60200: Post Colonial literature	• Introduce post-colonial literature • Understand and study the importance of post-colonial studies in a globalized world • Analyse the issues expressed in the literary text.
ENGDSE 60110: Literary Theory	• Acquaint learner with relevant discourse or theories revolving around class, gender, power, language, race, identity and so forth. • Understand the theories of Marxism, Feminism, Post-structuralism, and post-colonial study.
ENGDSE 60130:Partition Literature	• Understand then most horrific event of the twentieth century subcontinent history.

	• Understand and study the background of partition. • Analyse the text written on partition.

B. A Honors in History	
CBCS (Core Course)	
Semester I	
Course Name	**Course Outcomes**
HISHC101: History Of India-I	➢ To acquaint the students with the various source materials for the reconstruction of Ancient Indian History and the approaches of historical reconstruction. ➢ The students will be acquainted the knowledge about Human Evolution in Indian sub-continent, about various stages of Stone Age Cultures & Copper Age Cultures. ➢ To impart the knowledge about the ancient Indian Civilizations- settlement patterns, technological and economic developments with sophisticated modes of productions and socio-religious practices in Indus Valley civilization & Aryan Civilization.
HISHC102: Social Formations and Cultural Patterns of the Ancient World.	➢ The students will be acquainted with the evolution of humankind, their food production and beginnings of agriculture and animal husbandry. ➢ Growth of economy, social stratification, state structure and religion during bronze civilization(Mesopotamia, Egypt & China) ➢ To learn about Agrarian economy, urbanization & trade in ancient Greece and how slavery started in ancient Greece. ➢ To know about the development of democracy in ancient Greece and their culture.
HISGE-I: History of Assam: 1228-1826	➢ To know the political history of Assam from the coming of the Ahoms in early parts of 13th century to the occupation by the English East India Company in the first half of the 19th Century. ➢ To understanding the major and significant stages of development in the Brahmaputra Valley - the political, social and cultural history during the most important formative period.

Semester II	
HISHC103: History of India II	➢ To acquire the knowledge of agrarian economy in India and led to the growth of urbanization in Northern, Central India and Deccan, development of trade networks and an increasingly diversified social stratification. ➢ To acquaint the students with the process of state formation, about the Mauryan and the post Mauryans polities with special reference to the Kushanas, Satvahanas and the Guptas. ➢ To know about the land grants, land rights and peasantry and religious traditions of early India.
HISHC104: Social Formations and Cultural Patterns of the Medieval World	➢ To know about the formation of Roman Empire, slave society, culture and trade. ➢ To acquire the knowledge about crisis and disintegration of the Roman Empire and factors responsible for the decline of Roman Empire. ➢ The learners will be acquainted with economic development in Europe from 7^{th} to 14^{th} centuries covering Production, technological developments and growth of trades and also learn about feudal crisis.
HISGE2: History of India from the Earliest Times to 1526	➢ To acquaint the students with the general outline of the history of India from the Harappan Civilization to the coming of the Mughals to India in the first quarter of the 16^{th} century. ➢ To impart knowledge about the comprehensive idea of development in all spheres during this period.
Semester III	
HISHC105: History of India III (750-1206)	➢ This paper intends to acquaint the students with the different sources of studies to know about period from 750 TO 1206 AD where includes the rise of Rajputs and emergent of state system in the north and south India after the decline of the Mauryan and Guptas with special reference to Rastrakutas, Palas and Pratiharas. ➢ To impart knowledge about social changes due to agrarian structure and trade &

	commerce. ➢ To acquire the knowledge of religious & cultural changes during the period. Evolution of Tantrism, Puranic traditions, Buddhism, Jainism and also Islamic intellectual traditions. Evolution of regional art & architecture.
HISHC106: Rise of the Modern West-I	➢ This paper is to acquaint the pupils with the major changes that took place in medieval Europe. Students to know about Feudalism in Europe, transition from Feudalism to Capitalism, concept of Colonialism and economic condition of Europe through expansion of colonialism in European countries. ➢ To impart knowledge to the students about emergence of Renaissance in Europe in 16th century onwards and it's impact in different spheres of European society. Reformation and Martin Luther, impact of Protestant Reformation movement and Counter-Reformation movement in Europe. ➢ To know about Economic developments of the sixteenth century Europe, commercial revolution, the price revolution ect. through colonialism and expansion of empire by European countries. ➢ Emergence of European State system, Thirty years war and it's results, rise of Absolutism with special reference to Spain, France, England and Russia.
HISHC107: History of India IV (C1206-1550)	➢ This paper is to impart knowledge to the students about Sultan period in India From 1206 to 1250 where includes specially Khaljis, Tughlaqs, Sayids&Lodhis. At the same time emergence of provincial dynasties in Vijaynagar& Bahmani kingdoms. ➢ Student can acquire a brief knowledge about the society, economy religion and culture of the sultanate period.
Semester IV	
HISHC108: Rise of the Modern	➢ The paper mainly focuses on instance crises

West II	of seventh century Europe. ➢ Origin of the civil war, restoration and religious settlement and land settlement in England. ➢ Focus on scientific revolution, concept of mercantilism and colonial policies of European states. ➢ Student will get knowledge about the enlightened despotism of Europe in 17-18th century. ➢ Impart the knowledge how United States was able emerge as a major power in the globe with their strategical partner Britain
HISHC109: History of India-V (c. 1550-1605)	➢ Student wills posses the knowledge about different historical sources of Mughal period. ➢ How the initial Mughal rulers did captured India and consolidated their power. ➢ Achievement of Akbar as a nation builder. ➢ Student can acquire knowledge of artistic, intellectual and religious thoughts of this period.
HISHC110: History of India VI (c.1605-1750s)	➢ Student can possess the idea of consolidation of Mughal Empire during the time of Jahangir and Shahjahan. ➢ The reign of Aurangzeb specially his orthodox religious view. ➢ Rise of regional powers in the later Mughal period. ➢ Mansabdari and Jigirdari system and its impact on Economy. ➢ Development of new forms of paintings, art and architecture as well as literature. ➢ Idea of Mughal trade and commerce and beginning of the European settlement.
Semester V	
HISHC1011: History of Modern Europe-I (c. 1780-1939)	➢ Student will get the ideas originated form epoch making event French Revolution. ➢ Life and events of Nepoleon. ➢ Idea of reaction and revolution of 19th century Europe. ➢ To acquaint with the knowledge that late 18th century to the 1940 was a time of industrial capitalization when there was great social and economic change in Europe. ➢ To know how in 19th and 20th century emerge

	the verities of nationalism and territorial nation- state developed. ➢ To have the knowledge of background of the world war I.
HISHC1012: History of India VII (c.1750-1857)	➢ To attain the knowledge of India in the mid-18th century and how East India company captured the political power in India. ➢ Information about the colonial state and ideology. ➢ How the colonialism did changed the economy, society and culture in India. ➢ How did popular resistance develop in India as a result of the discontent over the changes brought by the colonial rule.
HISHDSE501: Early and Medieval Assam till 1826	➢ Information of the state formation process in Brahmaputra valley before the Ahoms, how Ahom rules change the socio-economic condition of Assam. ➢ Political unity under the Ahoms and Ahom-Mughal conflict. ➢ Internal crisis and foreign invation in the later part of the Ahom period and knowledge about Ahom administration.
HISHDSE502: History of Modern Assam (1826-1947)	➢ Information about the establishment of British rule in Assam, early British administrator and their various reforms. ➢ Anti-British revolt in the initial phase of the British rule. ➢ Annexation of other neighboring territories by British. ➢ Impact of the revolt of 1857 in Assaam. ➢ Different peasant uprising in Assam and its root causes.
Semester VI	
HISHHC1013: History of India VIII (c.1857-1950)	➢ To have the knowledge about the application of printing press and its impact on Indian society. ➢ Rise of nationalism in India against colonial rule and different group of politics. ➢ Mahatma Gandhi and Indian freedom Movement. ➢ How independence was achieved and history of partition.

HISHC1014: History of Modern Europe-II(c.1780-1939)	➢ Knowledge about the new forms of parliamentary democracy, Civil Liberties and Socialism took place in Europe after initial resistance. ➢ Knowledge about crisis of feudalism in Russia and experiment of Socialism,. ➢ Division of Europe in name of ideology and its impact. ➢ Acquire knowledge about the causes 2nd world war.
HISHDSE601: Social and Economic History of Assam	➢ To have the knowledge of development of cast system and existence of different social classes and their occupation. ➢ To knowledge about the different religious faith in Assam. ➢ Impact of new-Vaisnava Movement. ➢ Information about the land revenue system and land ownership, development of agriculture, medium of exchange etc. ➢ Art and architectural development in Assam from ancient to medieval time. ➢ Impact of colonial role, contribution of Christian missionaries to the field Assamese language and literature.
HISHDSE602: Historiography	➢ Definition of History, varieties of History and its objectivity. ➢ Knowledge about source of history and its criticism. ➢ Relations between history and other allied subject. ➢ Information of evolution of historiography from ancient to medieval times. ➢ Development of Marxian view in history writing ➢ History writing tradition in India and modern development

Joya Gogoi College
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B. Sc Mathematics	
CBCS (Honours)	
Semester I	
Course Name	**Course Outcome**
C-1: Calculus	After going through this course, the students will be able to • Evaluate the behaviours and graphs of functions. • Use basic integration techniques to calculate area and volume. • Find higher order derivatives of functions, maximum, minimum etc. • Sketch parametric curves (e.g. cycloid, epicycloids etc).
C-2: Algebra	After going through this course, the students will be able to • Demonstrate the concepts and methods of classical algebra and preliminaries of number theory. • Develop the concept of linear transformation and its matrix representation. • Demonstrate the understanding of the concepts of vector space and dimensions. • Understand the problems that apply algebra to Chemistry, Economics, Computer science and Engineering.
GE-1: Differential Calculus	After going through the course Students will be able to • Understand the concepts of limit and continuity. • Find higher order derivates of various kinds of function. • Trace parametric curves and polar curves. • To find tangent normal, curvature, asymptotes etc. • Expand functions using Taylor's series, Maclaurin's series.
Semester II	
C-3: Real Analysis	After going through this course, the students will be able to • Distinguish the various properties of real number. • Understand the concepts of different types of sequence and Series over $\mathbb{R}$. • Use various tests for convergence to find if the given sequence or series is converging or diverging.
C-4: Differential Equations	After going through this course, the students will be able to • Apply the techniques in solving various ordinary differential equations. • Solve various mathematical models used in real life problems by applying these techniques.

	• Plot second and third order solution family of differential equation.
GE-2: Differential Equations	After going through this course, the students will be able to • Solve first and higher order linear differential equations. • Understand the concepts of linear and non-linear PDE. • Classify second order PDE into elliptic, parabolic and hyperbolic through illustrations.
Semester III	
C-5: Theory of Real Functions	After going through this course, the students will be able to • Describe and elaborate limit, continuity, and differentiability of real valued and/or real functions. • Understand various introductory theorems associated with real functions. • Expand functions using Taylor's series and Maclaurin's series expansions.
C-6: Group Theory I	After going through this course, the students will be able to • Demonstrate the understanding of binary operations and algebraic structure forming a group. • Discuss subgroups, cyclic subgroups, abelian subgroups etc. • Understand the concepts and standard properties of group homomorphisms.
.C-7: PDE and Systems of ODE	After going through this course, the students will be able to • Understand the basic concepts of PDE and solve using various techniques (Lagrange's method, Charpit's method, Jacobi's method) • Classify second order linear PDE, reduce it to canonical form and hence solve it. • Solve various physical problems (Vibrating String, Heat conduction) . • Solve IVPs using numerical methods. • Solve system of linear ODEs.
GE-3: Real Analysis	After going through this course, the students will be able to • Distinguish the various properties of real number. • Understand the concepts of different types of sequence and Series and their convergence. • Demonstrate Power series and evaluate its radius of convergence.
Semester IV	
C-8: Numerical Methods	After going through this course, the students will be able to • Find the roots of polynomial and transcendental equations. • Solve system of linear equations using iterative methods. • Construct a polynomial for a given set of data using

	interpolation. • Evaluate integrals using numerical integration formulae. • Solve initial value problems using single and multi-step methods.
C-9: Riemann Integration and Series of Functions	After going through this course, the students will be able to • Discuss Riemann integration and its conditions of integrability. • Understand and demonstrate the continuity, differntiability and integrability of the limit function of a sequence and series of funcitions with the use of theorems on it. • Differentiate and integrate power series, find the radius of convergence.
C-10: Ring Theory and Linear Algebra I	After going through this course, the students will be able to • Demonstrate the understanding of binary operations and algebraic structure forming a ring. • Discuss subgrings, integral domains, fields, ideals etc. • Understand the concepts and standard properties of ring homomorphisms and isomorphisms. • Understand the idea of linear transformation and its algebra along with the related concepts like rank, nullity, null space, range etc.
GE-4: Algebra	After going through this course, the students will be able to • Discuss various groups namely abelian, non-abelian groups, Zn groups under addition modulo n etc. • Understand the concepts of subgroups, cyclic subgroups, concept of a subgroup generated by a subset. • Discuss subgrings, integral domains, fields, ideals etc.
Semester V	
C-11: Multivariate Calculus	After going through this course, the students will be able to • Understand the concepts from one variable calculus to function of several variables. • Demonstrate and use various techniques of double and triple integrals. • Demonstrate the relation among line, double and triple integrals. • Think critically and solve application of real-world problems involving double and triple integrals.
C-12: Group Theory II	After going through this course, the students will be able to • Solve contemporary problems by applying results from preliminary concepts. • Discuss group automorphism, direct products and Sylow's theorems and its consequences. • Use the theories and ideas in communication theory, electrical engineering, computer science and cryptography.
DSE-I: Analytical Geometry	After going through this course, the students will be able

	to • Learn the techniques of sketching conics and conicoids. • Classify quadratic equations representing lines, parabola, ellipse and hyperbola. • Solve various geometrical problems based on conics, sphere and conicoids analytically.
DSE- II: Mathematical Modeling	After going through this course, the students will be able to • Understand power series solutions of Differential equations. • Understand the idea of Laplace transformations and inverse Laplace transformations and their applications to solve differential equations. • Demonstrate various simulation and linear programming models and their applications.
Semester VI	
C-13: Metric Spaces and Complex Analysis	After going through this course, the students will be able to • Describe metric spaces and various properties associated with it. • Demonstrate limits, continuity and singularities for functions of complex variable. • Describe complex number system, its differentiation and integration, Laurent series , etc .
C-14: Ring Theory and Linear Algebra II	After going through this course, the students will be able to • Solve real world problems by applying theorems proof/ solution techniques. • Understand the concept and idea of dual spaces, dual basis, transpose of a linear transformation etc. • Discuss polynomial rings over commutative rings and the concepts of PID, ED, UFD etc. • Find the matrix associated with a linear transformation w.r.t given basis.
DSE- III: Linear Programming	After going through this course, the students will be able to • Discuss linear programming problem, its formation and algebraic solution. • Demonstrate various optimization techniques pertaining to linear programming. • Apply linear programming to problems arising out of real-life problems. • Use the concepts of game theory in real life situations.
DSE-IV: Mathematical Methods	After going through this course, the students will be able to • Discuss Fourier series and its various types which are very useful in physical science problems. • Solve Boundary value problems and Initial value problems in 1-D and 2-D cases, Laplace and Poisson equations in 2-D cases.

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BSc. Honours with Physics	
CBCS (Core Course)	
Semester-I	
Course Name	**Course Outcomes**
PHYSICS-C-I: MATHEMATICAL PHYSICS – I	At the completion of this course, a student with the knowledge and understanding of these mathematical methods can solve problems in several elementary branches of Physics like mechanics, electromagnetic theory, statistical Physics, thermal Physics etc. The student can also learn computer programming and numerical analysis and know its role in solving problems

	in Physics.
Physics-C- II: MECHANICS	At the completion of this course, a student will be able to understand about the basic concepts of mechanics by simultaneous study of linear and rotational dynamics. A detail understanding of inertial and non-inertial frame and as well as the peculiar concepts of the special theory of relativity can be realized in this course. Analysis of harmonic oscillator system and motion of planetary system as central force problem can be also learnt within the realm of the course. .
Semester-II	
PHYSICS–C III: ELECTRICITY AND MAGNETISM	At the completion of this course, a student will get basic knowledge of electricity and magnetism as well as the fundamental laws of electric and magnetic field. The basic principle of the electrical circuit (AC) circuit and electrical networking is thoroughly discussed in the course.
PHYSICS–C IV: WAVES AND OPTICS	At the completion of this course, a student will be able to learn various phenomenon related to light such as diffraction, interference, polarization etc. al. The properties of longitudinal and transverse wave as well as the characteristic of central wave equation is also in this course. Students will obtain knowledge about various light experiments like Newtons Ring, Llyod Mirror within the realm of the course.
Semester-III	
PHYSICS-C-V: MATHEMATICAL PHYSICS – II	At the completion of this course, a student will be able to use diverse mathematical techniques to formulate and solve a problem in basic Physics. Special emphasis on the series solution method using Frobenius techniques as well as Legendre, Hermite, Bessel equation is also given in this course. In the mathematical lab section, students will learn the use of Scilab as well as Mathematica to construct a problem in Physics computationally.
PHYSICS C-VI: THERMAL PHYSICS	At the completion of this course, a student will be able to understand the classical laws that govern the field of thermodynamics and use the laws to study the central theme of thermodynamics-the heat engine. With the understanding of the concept of entropy and various other thermodynamic potential, students can probe questions in varied fields of Physics, chemistry and biology based on principles of Thermal Physics.
PHYSICS-C-VII: DIGITAL SYSTEMS AND APPLICATIONS	At the completion of this course, a student will properly understand the key ideas behind digital electronics. With the study of fundamental gates, Flip-flops, Counter, Registers, Multivibrator, students will get to know how a complex digital system microprocessor or RAM or ROM

	operates.
Semester-IV	
PHYSICS-C-VIII: MATHEMATICAL PHYSICS-III	At the completion of this course, a student will be able to 1. Write a problem in Physics (slightly more advanced than those in Mathematical Physics I and II) in the language of mathematics. 2. Identify a range of diverse mathematical techniques/ideas to formulate, simplify and solve some problems in Physics. 3. Analyse some of the useful mathematical ideas and techniques. 4. Apply the knowledge and understanding of these mathematical methods to solve problems in several fundamental topics in Physics. 5. Construct a problem in Physics computationally and use simulations to design an experiment.
PHYSICS-C-IX: ELEMENTS OF MODERN PHYSICS	At the completion of this course, a student will be able understand the theoretical basis that revolutionized the 20^{th} century Physics- Quantum Mechanics. The understanding of the concepts presented in this course, namely Planck theory of Black Body radiation, de Broglie's wave particle duality, Schrodinger Wave Equation, Heisenberg uncertainty principle and his formulation of matrix mechanics, Born's interpretation of wave function can develop insight into the key principles and applications of Nuclear Physics, Atomic Physics and Condensed matter physics.
PHYSICS-C-X: ANALOG SYSTEMS AND APPLICATIONS	At the completion of this course, a student will be able to familiarize themselves about the basics of PN junction diode, bipolar transistors, operational amplifiers and oscillators. The students will be able to develop knowledge about analog to digital and digital to analog conversion techniques within the realm of the course.
SEM V	
PHYSICS-C-XI: QUANTUM MECHANICS AND APPLICATIONS	At the completion of this course, a student will be able to understand the fundamental concepts of quantum mechanics, such as Planck theory of Black Body radiation, de Broglie's wave particle duality, Schrodinger Wave Equation, Heisenberg uncertainty principle and his formulation of matrix mechanics, Born's interpretation of wave function in its concrete mathematical form. The applications of quantum mechanics in solving physical problems are also presented in this course.
PHYSICS-C-XII: SOLID STATE PHYSICS	At the completion of this course, a student will be able to familiarize with the structure of solid as well as the electronic and lattice vibration dependent behavior of solids. Various laboratory experiments associated with the course helps the students to learn the basic concepts in practical conditions.

PHYSICS DSE -I: CLASSICAL DYNAMICS	After completing the course, a student will be able to fundamental ideas of classical mechanics and the advantages of its formulation over Newtonian mechanics. With the understanding of the Langrangian and Hamiltonian formulation, the mechanics of central force motion as well as small amplitude system is explored within the realm of the course. The students can also observe the peculiar phenomena when transformed from Newtonian relativity to special relativity and to understand the concept of space-time.
PHYSICS DSE II: PHYSICS OF DEVICES AND INSTRUMENTS	After completing this course, a student will be able familiarize themselves with the following electronic devices and instruments: 1. UJT, FET, MOSFET, CMOS etc. and its application to different electronic circuits. 2. Rectifiers, passive and active filters, multivibrators, Phase Locked Loop etc. Different IC fabrication techniques as well as the standards of digital data communication can also be learnt in this course.
SEM VI	
PHYSICS-C-XIII: ELECTROMAGNETIC THEORY	At the completion of this course, a student will have a complete understanding of Maxwell's theory of Electromagnetic radiation and its application to explain the properties of the electromagnetic wave and its interaction with matter. Students will also be familiarized with the principles and processes related to polarization, interference, and diffraction along with their applications to the development of wave-guide and optical fibres.
PHYSICS-C-XIV: STATISTICAL MECHANICS	At the completion of this course, a student will understand the dynamical behavior of the microscopic constituents of a thermodynamic system. The students can apply the laws of statistics to a system having many degrees of freedom. All the basic laws of thermodynamics along with the laws of entropy can be understood in its microscopic detail.
PHYSICS-DSE 3: NUCLEAR AND PARTICLE PHYSICS	After the end of the course, a student will be able to understand various concepts in Nuclear Physics and its connections with other domains of Physics, particularly Quantum Mechanics, Mathematical Physics and Particle Physics. The various aspects of nuclear detectors and use of nuclear energy to the benefits of the human civilization can be learnt within the realm of the course.
PHYSICS-DSE 4: EXPERIMENTAL TECHNIQUES	After completing this course, a student will be able to enhance the knowledge of some measurement techniques and data and error analysis technique.The students will be familiarized with the working principle, efficiency, and applications of Transducers & industrial instrumentation in this course. A detail description of the Vacuum system

	and its accessories such as gauges, pump etc., is also given in this course.
PHYSICS-GE-1: MECHANICS (SEMESTER I, GENERIC ELECTIVE)	At the completion of this course, a student will be able to understand about the basic concepts of mechanics by simultaneous study of linear and rotational dynamics. A detail understanding of inertial and non-inertial frame and as well as the peculiar concepts of the special theory of relativity can be realized in this course. Analysis of harmonic oscillator system and motion of planetary system as central force problem can be also learnt within the realm of the course.
PHYSICS-GE-2 : ELECTRICITY AND MAGNETISM (SEMESTER II, GENERIC ELECTIVE)	At the completion of this course, a student will get basic knowledge of electricity and magnetism as well as the fundamental laws of electric and magnetic field. The basic principle of the electrical circuit (AC) circuit and electrical networking is thoroughly discussed in the course.
PHYSICS-GE-3: THERMAL PHYSICS AND STATISTICAL MECHANICS (SEMESTER III, GENERIC ELECTIVE)	At the completion of this course, a student will understand the dynamical behavior of the microscopic constituents of a thermodynamic system. The students can apply the laws of statistics to a system having many degrees of freedom. All the basic laws of thermodynamics along with the laws of entropy can be understood in its microscopic detail.
PHYSICS-GE-4: WAVES AND OPTICS (SEMESTER Iv, GENERIC ELECTIVE)	At the completion of this course, a student will be able to learn various phenomenon related to light such as diffraction, interference, polarization etc. al. The properties of longitudinal and transverse wave as well as the characteristic of central wave equation is also in this course. Students will obtain knowledge about various light experiments like Newtons Ring, Llyod Mirror within the realm of the course.

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BA Honors in Political Science	
CBCS (Core Course)	
Semester I	
Course Name	**Course Outcomes**
1.1: PAPER: C-1: UNDERSTANDING POLITICAL THEORY	The study of this course introduces the student to the idea of political theory, its history and approaches, and an assessment of its critical and contemporary trends. The course gives students the knowledge on political theory and practice through reflections on the ideas and practices related to State, Citizenship and Democracy.
1.2: PAPER: C-2: CONSTITUTIONAL GOVERNMENT AND DEMOCRACY IN INDIA	The course acquaints students with constitutional design of states structures, institutions, legislature, executive, judiciary, and their working overtime. The students can acquire knowledge on the Constituent Assembly and the Constitution of India, Organs of Government-Parliament, Executive and Judiciary, Federalism, Centre-State relations, Decentralization, and Local-Self Government in India.
PAPER: GE-1A: NATIONALISM IN INDIA	The course helps the students in understanding the struggle of Indian people against colonialism. This course begins with the Nineteenth Century Indian responses to colonial dominance in the form of reformism and its criticism and continues through various phases up to events leading to the Partition and Independence. This course tries to highlight its various conflicts and contradictions by focusing on its different dimensions: communism, class struggle, caste, and gender questions.
SEMESTER II	
2.1: PAPER: C-3: POLITICAL THEORY-CONCEPT AND DEBATES	The course helps the students familiarize with the basic normative concepts of political theory – Freedom and its positive–negative concept, different kinds of freedom, development of freedom etc, Equality-types of equality, Justice –development of justice, different types of justice etc, universality of Rights, different kinds of rights, features of rights, Bill of Rights, Common Law, UDHR, Three Generations of Human Rights.
2.2: PAPER: C-4: POLITICAL PROCESS IN INDIA	The course gives to know the students about the working of the modern institutions, political parties and the party system, elections and political behavior, political mobilization and leadership, regional aspirations in India. This course also

	introduces the students about religion, caste and politics, development, welfare, globalization and the state.
2: PAPER: GE-2A: FEMINISM: THEORY AND PRACTICE	The course tries to introduce the students to the contemporary debates on feminism and the history of feminist struggles. The course gives to know concepts in feminism, approaches to study of feminism, genesis of feminist movement in the west and in east, Indian experiences in contemporary issues - environment, domestic violence, rape, dowry, sexual harassment at workplace, right to property and customary versus constitutional law, gender relations in India.
SEMESTER III	
3.1: PAPER: C-5: INTRODUCTION TO COMPARATIVE GOVERNMENT AND POLITICS	The course familiarizes the students with the basic concepts and approaches to the study of comparative politics, nature, scope, development, third world approaches to comparative politics. It gives knowledge on capitalism, globalization, colonialism, decolonization, constitutional development and political economy of Britain and USA.
3.2: PAPER: C-6: PERSPECTIVES ON PUBLIC ADMINISTRATION	The course introduces the students to the idea of public administration as a discipline with its meaning, dimensions, significance, and evolutions. The course attempts to provide the students a comparative understanding on contemporary administrative developments. It gives to know the classical and contemporary theories of public administration, public policy, new public management, new public service approach, good governance, feminist perspectives.
3.3: PAPER: C- 7: PERSPECTIVES ON INTERNATIONAL RELATIONS AND WORLD HISTORY	The course seeks to equip the students with the basic intellectual tools for understanding International Relations. It introduces students to some of the most important approaches for studying international relations. This paper tries to make the students aware of the implicit Euro-centralisms of International Relations by highlighting certain specific perspectives from the Global South.
PAPER: GE-3B: GOVERNANCE: ISSUES AND CHALLENGES	The course gives students the knowledge on the concepts and different dimensions of governance highlighting the major debates in the contemporary times. It helps the students to understand the importance of the concept of governance in the context of a globalizing world, environment, administration, development, good governance initiatives introduced in India.
SEMESTER IV	
4.1: PAPER: C-8: POLITICAL PROCESSES AND INSTITUTIONS IN COMPARATIVE PERSPECTIVES	The course trains the students in application of comparative methods to study of politics. It gives to know the students about the approaches to studying comparative politics, political culture, new institutionalism, electoral and party system, nation-state, democratization, and federalism.

4.2: PAPER: C-9: PUBLIC POLICY AND ADMNISTRATION IN INDIA	The course gives the students an introduction to the interface between public policy and administration in India. It gives the knowledge on definition, meaning, models and processes of public policy, meaning, significance, approaches and types of decentralization, local self-governance, concept and significant of budget, budget cycle in India, RTI, Lokpal, Citizen's Charter and E-Governance concept of social welfare administration, Right to Education, National Health Mission, Right to Food Security, MGNREGA.
4.3: PAPER: C-10: GLOBAL POLITICS	The course introduces the students to the key debates on meaning and nature of globalization by addressing its political, economic, social, cultural and technological dimensions. It gives understanding globalization, global economy, and proliferation of Nuclear Weapons, NPT and CTBT, International Terrorism, State Terrorism, ecological issues like climate change and migration, human security etc, global shifts: power and governance.
PAPER: GE-4A: POLITICS OF GLOBALIZATION	The course introduces students to the concept of globalization, global politics, contemporary global issues, ecological issues, historical overview of International environmental agreements, climate change, global common debate, migration, and human security.
SEM V	
5.1: PAPER: C-11: CLASSICAL POLITICAL PHILOSOPHY	The course introduces the students to the approaches to the interpretation of Marxism, Totalitarian, Psychoanalytic, feminist, straussian, postmodernist, pluralistic, ancient political thoughts of Plato, Aristotle, Machiavelli, Hobbes, Locke.
5.2: PAPER: C-12: INDIAN POLITICAL THOUGHT-I	The course introduces the students to the specific elements of Indian Political Thoughts spanning over two millennia. It gives to know the traditions of pre-colonial Indian Political Thought-emergence of Brahmanism and shramanic, emergence of Islamic Traditions in India, development of Hindu-Muslim syncretism, Rajadharma, Manu, Aggannaasutta, Barani.
DSE-1A: CONTEMPORARY POLITICS IN ASSAM	The course introduces the students to the growing recognition worldwide of importance of the political economy approach to the study of global order. This course gives students the knowledge of different theoretical approaches, history of the evolution of the modern capitalist world, importance of contemporary problems, issues and debates on how these should be addressed.
DSE-2A: HUMAN RIGHTS IN A COMPARATIVE PERSPECTIVES	The course builds an understanding of human rights among students through a study of specific issue in comparative perspectives. It gives knowledge of human rights, its philosophical foundations, utilitarian rights, natural rights, and three generations rights, institutional arrangements –

	UNO, UDHR, ICCPR, ICESCR, Optional Protocols, Rights in South Africa and Indian Constitution, structural violence: caste, race, gender etc.
SEMESTER VI	
6.1: PAPER: C-13: MODERN POLITICAL PHILOSOPHY	The course introduces the students to the way the questions of politics have been posed in terms that have implications for larger questions of thought and experiences. Through the study of this course the students able to know about modernity and its discourses, Rousseau's social contract theory, General Will and education, Mary Wollstonecraft-women and paternalism etc.
6.2: PAPER: C- 14: INDIAN POLITICAL TGOUGHT –II	The course introduces the students to the trends and genesis of modern Indian political thought, reformists political thoughts-Raja Rammohan Roy, nationalists political thoughts-Gandhi, Nehru, and Tagore, thoughts for social change-Ambedkar, Lohia and M.N. Roy, thoughts of cultural nationalism-Iqbal, Saverkar.
6TH SEMESTER: PAPER: DSE-3B: UNDERSTANDING GLOBAL POLITICS	The course introduces the students to the key debates on the meaning and nature of globalization by addressing its political, economic, social, cultural and technological dimensions.
6TH SEMESTER: PAPER: DSE-4A: INDIA'S FOREIGN POLICY IN A GLOBALIZING WORLD	The course gives students the knowledge of the domestic sources and structural constraints on the genesis, evolution and practice of India's foreign policy. Students are instructed on India's shifting identity as a postcolonial state to the contemporary dynamics of India attempting to carve its identity as an 'aspiring power'. Through the study of the course students can acquire knowledge on India's foreign policy, India's relation with USA, USSR, CHINA, India's negotiating style and strategies, India's role in 21st century, India's role in the UN etc.

B. Sc Zoology	
CBCS (Honours)	
Semester I	
Course Name	**Course Outcome**
ZC101T NON-CHORDATES I:PROTISTS TO PSEUDOCOELOMATES	Through this course the students can learn about various types of Protozoa and animals having false coelom, their parasitic forms and their pathogenecity.
ZC102T PRINCIPLES OF ECOLOGY	Through this course the students will be able to know about ecosystem, community, details of ecological population and various conservation strategies of wildlife.
GE I ANIMAL DIVERSITY	The students can identify the difference betweeninvertebrates and vertebrates based on their general characters and distinctive characters.
Semester II	

ZC203T NON-CHORDATESII:COELOMATES	The students can learn about different types of coelomate animals, larval forms and their evolutionary significance.
ZC204T CELL BIOLOGY	Through this course the students can learn about cell, its organelles and their functions.
GE II INSECT VECTORS AND DISEASES	Through this paper students can learn about general morphology of insect, their classification, different orders of insects as vectors of diseases.
Semester III	
ZC305T DIVERSITY OF CHORDATA	The students will be able to know about chordate animals and its various types and their distribution around the world.
ZC306T ANIMAL PHYSIOLOGY: CONTROLLING AND COORDINATING SYSTEMS	The students can learn about various physiological systems of the body of animals, functions of the components of the system and how it works.
ZC307T FUNDAMENTALS OF BIOCHEMISTRY	Through this course the students can learn the biomolecules consisting our body cells, their functions, and their importance.
GE III HUMAN PHYSIOLOGY	Through this course the students can learn about different physiological systems of human body, mechanism, and its functions.
Semester IV	
ZC408T COMPARATIVE ANATOMY OF VERTEBRATES	The students can learn about anatomy of different vertebrate animals and their comparisons
ZC409T ANIMAL PHYSIOLOGY:LIFE SUSTAINING SYSTEMS	Through this course the students can learn about various physiological systems of animals, how it works and their functions.
ZC410T BIOCHEMISTRY OF METABOLIC PROCESS	The students can learn about basics of metabolism, its necessity and different metabolism systems existing in our body.
GE IV ENVIRONMENT AND PUBLIC HELTH	Through this paper the students can learn about sources of environmental pollution, causes of climate change, waste management technologies and various diseases cause by environmental pollution.
Semester V	
ZC511T MOLECULAR BIOLOGY	The students can learn about molecular mechanism of existence of animals.
ZC512T PRINCIPLES OF GENETICS	This paper helps students to know about basics of genetics, genetical problems, cause of genetic mutation.
ZD503T ENDOCRINOLOGY	Through this paper the students can learn about various endocrine types of glands of human body, their structure, and their functions.
ZD504T BIOLOGY OF INSECTA	The students can learn about INSECTS Morphology, Taxonomy, Physiology and insect vectors.
Semester VI	
ZC613T	Through this paper the students can learn about

DEVELOPMENTAL BIOLOGY	embryonic development of animals, its various stagesand implications of developmental biology.
ZC614T **EVOLUTIONARY** BIOLOGY	The students can learn about various evidences of evolution of man, molecular analysis of human origin, reasons of variation among human beings,
ZD608T IMMUNOLOGY	Through this paper the students can learn about immune system of living organism, types of immunity, molecular composition of immunomolecules, vaccines: its types and its preparation.
ZD609T PARASITOLOGY	The students can learn about various parasitic forms of both non chordates and chordate animals, morphology of parasites, their pathogenecity , prophylaxis and treatment.