



আনন্দরাম ঢেকিয়াল ফুকন মহাবিদ্যালয়
ANANDARAM DHEKIAL PHOOKAN COLLEGE

NAAC accredited with B++ Grade with CGPA 2.94 (3rd Cycle)

2.6.1 Programme and Course outcomes for all Programmes offered by the institution for the session 2023-2024

- a) PO and CO of 1st and 2nd Semester as per NEP 2020 Syllabus
- b) PO and CO of 3rd to 6th Semester as per existing CBCS Syllabus

ANANDARAM DHEKIAL PHOOKAN COLLEGE
Courses Offered under NEP-2020 syllabus

Department of Arabic

Program Name	Paper Code	Paper Name	Course Outcome
Arabic Core (1 st Semester)	ARA0100104	Basic of Arabic Language	The student will learn basic information of Arabic Language and achieve proficiency in speaking, reading and writing
Arabic Core (2 nd Semester)	ARA0200104	Syntax and semantics of Arabic Language	The students will be able to construct correct sentences in Arabic by following grammatical rules and the semantics.
SEC (1 st Semester)	SEC0110003	Spoken Arabic-I	The students will be able to recognize and pronounce Arabic alphabet correctly and at the end of the course they will be able to compose simple texts in Arabic.
SEC (2 nd Semester)	SEC0210303	Spoken Arabic-I	The students will be able to communicate with others in different situations through Arabic.

Department of Assamese

Program Name	Paper code	Paper Name	Course outcome
Assamese Core (1 st Semester)	ASS0100104	History of Assamese language and literature (Up to 1826 CE)	The course aims to provide an introduction to the history of the Assamese language and literature up to 1826. It also includes teaching representative lessons to facilitate a comprehensive understanding of the literature of each period and its unique characteristics.
AEC (1 st Semester)	AEC0100102	Communicative Assamese	The course aims to provide an introductory understanding of Assamese pronunciation, spelling, punctuation, rhetoric, applications, advertisements, and

			news reporting.
SEC (1 st Semester)	SEC0100703	Assamese spelling	Upon completing the course, students will be able to overcome difficulties related to Assamese spelling.
MDC (1 st Semester)	MDC0100503	Humanities & Social science	The course aims to provide an introductory understanding of women's education, politics, and literature in modern Assam.
Assamese Core (2 nd Semester)	ASS0200104	History of Assamese language and literature (1826 to 2000 CE)	The course aims to provide an introduction to the history of the Assamese language and literature from 1826 to 2000. It also includes teaching representative lessons to facilitate a comprehensive understanding of the literature of each period and its distinct characteristics.
SEC (2 nd Semester)	SEC0211303	Translations: Principles & Practice	The course aims to provide a preliminary understanding of the practice of translation, its principles, and its application through examples.

Department of Bengali

Program Name	Paper Code	Paper Name	Course Outcome
AEC (1 st Semester)	AEC0100202	Bangla Sahitya ebong Proyogmulok Bangla Byakaran	To obtain the knowledge about Bangla Sahitya and practical knowledge about grammatical aspects of Bengali.
SEC (1 st Semester)	SEC0102103	Bangla Bhashar Bibhinna Byabaharik Dik O Sambhabana	To obtain the practical knowledge of several aspects of Bengali language
SEC (2 nd Semester)	SEC0201703	Bangla Bhasha O Sahitya-path paddhati O Sahityer Rupantar	To obtain the practical knowledge of translation with several terms of Bengali Sahitya

Department of Botany

Program Name	Paper Code	Paper Name	Course Outcome
Botany Core (1 st Semester)	BOT0100104	Plant Microbial Diversity	1. Knowledge with the concept of different kingdoms and the theories behind how life began. 2. Basic understanding of the characteristics,

			<p>distribution, classification, reproduction, and current status of various microbial and plant communities.</p> <p>3. Good understanding of virus, algae, fungus, bryophyte, and pteridophyte cell structures, dicotyledonous and monocotyledonous leaf venation patterns, and inflorescence and fruit features.</p> <p>4. Knowledge to identify various groups of organisms in the laboratory through morphological analysis</p>
Botany Core (2 nd Semester)	BOT0200104	Cell Biology and Biomolecules	<p>1. Able to obtain knowledge of structure, classification, and physicochemical properties of biomolecules and enzymes.</p> <p>2. Detailed knowledge of the structure, properties, and functions of a cell and its components.</p> <p>3. Acquainted with practical knowledge of properties of cell and cell membranes, DNA staining techniques, and microscopy of the plant cell.</p> <p>4. Able to identify various biomolecules in the laboratory by qualitative tests of biomolecules.</p>
SEC (1 st Semester)	SEC0105503	Herbarium Techniques and its Role in Modern Science	<p>1. Basic knowledge on field techniques</p> <p>2. Herbarium preparation and maintenance</p>
SEC (2 nd Semester)	SEC0204603	Floristic Methods of Vegetation Description	<p>1. Learn good floristic Variation and vegetation of Assam</p> <p>2. Knowledge of herbarium preparation and maintenance</p> <p>3. Research Methodology of Floristic Study.</p>

Department of Chemistry

Program Name	Paper Code	Paper Name	Course Outcome
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Chemistry Core (1 st Semester)	CHE0100104	Chemistry I	On successful completion, students would have clear understanding of the concepts related to atomic and molecular structure, chemical bonding, periodicity and states of matter. Students will be able to work in a chemical laboratory following standard safety protocols.
SEC (1 st Semester)	SEC0101003	Basic Analytical Chemistry	On successful completion, students would have clear understanding of the concepts related to analysis of soil, water and food. Students will be able to estimate of macro nutrients in soil and study trap cases using appropriate chemicals.
Chemistry Core (2 nd Semester)	CHE0200104	Chemistry II	Students shall understand and apply the concepts of chemical bonding, coordination chemistry, acids and bases and the reactive intermediates. They shall also understand the chemistry from a thermodynamic point of view. Students will acquire preliminary training on quantitative analysis, synthesis of coordination compounds, qualitative analysis of organic compounds and measurement of a few basic thermodynamic parameters.
SEC (2 nd Semester)	SEC0200303	Analytical Clinical Biochemistry	On successful completion, students will be able to identify various molecules relevant to a particular pathological condition and their estimation protocols.

Department of Commerce

Program name	Paper code	Paper name	Course outcome
Commerce Core (1 st Semester)	BCM0100104	Business Organization and Management	The students will be able to understand about organization structure and the processes and principles followed to run an organization
Commerce Core (1 st Semester)	BCM0100204	Financial Accounting	Students will be able to record and classify financial transactions and prepare financial statements in accordance with accounting standards
Commerce Core (1 st Semester)	BCM0100304	Indian Financial	It will help the students in understanding the components

		System	and functions of Indian Financial system & the role of regulatory bodies
MDC (1 st Semester)	MDC0101003	Business Mathematics	It will enable the students to understand and use mathematical concepts in business world.
MDC (1 st Semester)	MDC0100403	Basics of Commerce and Management	Students will gain a comprehensive understanding of business operations
Commerce Core (2 nd Semester)	BCM0200104	Corporate Accounting	The students will be able to analyze and interpret financial statements, prepare financial reports of corporates
Commerce Core (2 nd Semester)	BCM0200204	Principles & Practice of Management	The students will be able to apply management principles and theories in effectively managing an organization
Commerce Core (2 nd Semester)	BCM0200304	Principles of Marketing	It will help the students to analyze consumer behavior, develop marketing strategies and evaluate different market environments
VAC (2 nd Semester)	VAC0200302	Trade & Commerce in India	It will equip the students with a comprehensive understanding of Indian business practices, trade regulations and market dynamics
SEC (2 nd Semester)	SEC0211903	E-Commerce	The students will understand the concept and application of online business models and digital markets.
MDC (2 nd Semester)	MDC0200903	Business Economics	It will help students to analyze economic issues and apply economic models to solve business problems
MDC (2 nd Semester)	MDC0200403	Personal Financial Management	The students will be able to understand the need of financial objectives and the strategies used to reach personal financial goals.

Department of Computer Science

Program Name	Paper Code	Paper Name	Course Outcome
Computer Science Core (1 st Semester)	COM0100104	Computer Fundamentals and Programming	The paper "Computer Fundamentals and Programming" aims to provide foundational knowledge of computer systems and programming concepts. It equips students with essential

			skills to write basic C programs and understand computer language and software development principles.
Computer Science Core (2 nd Semester)	COM0200104	Computer Organization	The paper "Computer Organization" provides an understanding of the internal structure and components of computer systems. It equips students with the knowledge to analyze and design the architecture of computers, including memory, processors, and data representation
SEC (1 st Semester)	SEC0112003	Information Technology in Business	The paper "Information Technology in Business" focuses on how IT is applied to enhance business operations. It helps students understand the role of technology in improving efficiency, innovation, and competitiveness in the business world.
SEC (2 nd Semester)	SEC0206203	Html Programming	The paper "HTML Programming" introduces students to the fundamentals of web development using HTML. It equips them with the skills to create and structure web pages, ensuring effective use of tags, links, images, and multimedia for building dynamic websites.
MDC (1 st Semester)	MDC0100603	Information and Communication Technologies-I	The paper "Information and Communication Technologies" explores the technologies used for communication and information processing. It helps students understand the integration of hardware, software, and networking to improve data exchange, connectivity, and communication in various sectors.
MDC (2 nd Semester)	MDC0200603	Information and Communication Technologies-II	The paper "Information and Communication Technologies" provides some advance exploration of the technologies utilized for communication and information processing. It enables students to comprehend the integration of hardware, software, and networking to enhance data exchange,

			connectivity, and communication across various industries.
BCA (1 st Semester)	CIT0100104	Computer Fundamentals	The paper "Computer Fundamentals" provides an introduction to the basic concepts of computers, including hardware, software, and the principles of computer operation. It aims to equip students with essential knowledge about computer systems and their applications in various fields.
BCA (1 st Semester)	CIT0100204	Introduction to C-programming	The paper "Introduction to C Programming" introduces students to the fundamental concepts of programming using the C language. It focuses on developing problem-solving skills, understanding syntax, and learning key programming constructs such as variables, loops, and functions to write efficient and structured programs.
BCA (1 st Semester)	CIT0100304	Mathematics-I	The paper "Mathematics -I" covers the foundational concepts of calculus, including limits, differentiation, and the properties of complex numbers. It enables students to apply mathematical techniques to solve problems in real-world scenarios and understand the behavior of functions and systems.
BCA (2 nd Semester)	CIT0200104	Data Structures & Algorithms Using C	The paper "Data Structures & Algorithms Using C" provides an in-depth understanding of various data structures and algorithms, focusing on their implementation in the C programming language. It equips students with the skills to design efficient algorithms and solve complex problems through effective data organization and manipulation techniques.
BCA	CIT0200204	Digital Logic	The paper "Digital Logic Fundamentals" covers the basic

(2 nd Semester)		Fundamentals	principles of digital circuits and systems, focusing on binary numbers, logic gates, and Boolean algebra. It enables students to understand and design simple digital circuits, which are essential for computer hardware and electronic systems.
BCA (2 nd Semester)	CIT0200304	Mathematics II	The paper "Mathematics: Sets, Relations and Functions, Graph Theory, Combinatorics, Matrices, and Vector Spaces" provides a comprehensive study of mathematical structures and their applications. It covers fundamental topics such as set theory, relational algebra, graph theory, combinatorics, matrix operations, and vector spaces, equipping students with essential tools for problem-solving and analysis in various fields of computer science.

Department of Economics

Program Name	Paper code	Paper Name	Course outcome
Economics Core (1 st Semester)	ECO0100104	Introductory Economics	This course aims to develop the simple conceptual frameworks which will enable students to understand and comments upon real economic issues like basic economic problems, demand, supply, GDP and their inter-linkages and also simple ideas of public finance. It will also allow them to evaluate economic policies in terms of coherent logical structure.
SEC (1 st Semester)	SEC0109003	Rural Marketing	This course will make the students understand about the agricultural marketing system and role of price discovery in our economic system. It will also enable the students to define and explain the value-added processing and consumer demand issues. The students will also be able to understand the role of information technology in rural marketing.

Economics Core (2 nd Semester)	ECO0200104	Basic Elements of Economics	At the end of the course, the students will be able to understand and critically evaluate the various measures of development. The students will also be able to use and apply the relevant statistical tools to systematically examine any given economic phenomenon. They will be also be able to describe and analyses the Indian economy in terms of its income and demographic features. It will also make them understand about the functioning of a financial system and analyze the current events of the global and national economy.
SEC (2 nd Semester)	SEC0204403	Farm Management	This course aims to develop the concept of farm management, various types of farming that exist and introduce them to the recent developments in this aspect. It will also enable the students to enhance the existing knowledge of use of statistical tools and help them to use such knowledge in practical works.

Department of Education

Program Name	Paper Code	Paper Name	Course Outcome
Education Core (1 st Semester)	EDU0100104	PRINCIPLES OF EDUCATION	The paper will help the students to understand the aims of education. The broad areas of this paper focus on democracy, discipline and various specific areas which is essential for individual and social development of students. For a democratic country what qualities must be having among students, this knowledge is provided to student. After completion of this paper students will be able to understand the concept of discipline, leadership qualities and real meaning of freedom.
Education Core (2 nd Semester)	EDU0200104	EDUCATIONAL PSYCHOLOGY	After completion of these course students will be understand the concept of educational Psychology, motivation in learning, concept of intelligence and personality.
SEC (1 st Semester)	SEC0110403	TEACHING SKILLS	The outcome of this course is to help the students to understand the concept of teaching and various teaching skills that are used in practical life. The paper enables the students the

			methodology of dynamic classroom teaching.
SEC (2 nd Semester)	SEC0209403	PUBLIC SPEAKING SKILL	The paper will help the student to improve their speaking skills and also help the students to develop their personality.

Department of English

Program	Paper code	Paper Name	Course Outcome
English Core (1 st Semester)	ENG010104	English Literary and Social History	To acquaint students with literary and cultural institutions understand the context of literature engage with social and political realities that has impacted English Literature.
AEC (1 st Semester)	AEC0100402	Alternative English	To acquaint students with the literary practices and trends through study of poems and stories.
SEC (1 st Semester)	SEC0100603	Art of Acting	Learners will be able to enact various characters for theatre and media productions.
English Core (2 nd Semester)	ENG020104	Form, Genres and Concepts of English Literature	To acquaint students with major forms, genres of English literature.
AEC (2 nd Semester)	AEC0200102	English Communication	To understand the process of communication, speak with confidence and clarity, identify purpose of listening, and apply conventions of intonation, stress and rhythm.
SEC (2 nd Semester)	SEC0203203	Drama and Mime	To gain an insight into the history of western as well as Indian performance art, and also to develop creative genius among students.

Department of Geography

Program Name	Paper Code	Paper Name	Course Outcome
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Geography Core (1 st Semester)	GGY0100104	Introduction to Physical Geography	<ol style="list-style-type: none"> 1. Understand the evolution, concept, scope, and branches of Physical Geography and its interdisciplinary nature. 2. Appreciate the scope and significance of Geomorphology, and comprehend fundamental concepts such as catastrophism and uniformitarianism. 3. Grasp the meaning, scope, and critical elements of Climatology such as insolation, heat budget and the relationship between temperature, pressure, and precipitation. 4. Understand the fundamentals of Oceanography, including the origins of ocean basins and currents, and the relationship between temperature and salinity. 5. Comprehend the essence, scope, and key concepts of Biogeography such as the biosphere, ecology, ecosystems, and biodiversity.
Geography Core (2 nd Semester)	GGY0200104	Introduction to Human Geography	<ol style="list-style-type: none"> 1. Understand human geography's scope, its relationship with other sciences and development trend. 2. Explain the concept of man-environment relationship, and interpret different schools of thought. 3. Evaluate and contrast different schools of human geography, focusing on Human Ecology, Landscape and Locational Analysis. 4. Assess the impact of environment on man and his activities on environment in various global Contexts, with emphasis on Urbanization. 5. Analyse the concept of ethnicity and race and identify global patterns of racial composition, investigating urban and rural socio-economic practices.

SEC (1 st Semester)	SEC0103903	Field Survey: Techniques	This course will help students to proceed with a research problem and the steps he/she should adopt and tools to be used for doing quality research. The students shall get a chance to observe ground reality directly and minutely, it will help to develop understanding about designing and writing a research report.
SEC (2 nd Semester)	SEC0210603	Statistical Techniques in Geography	The course will also provide insights into the concept of sampling, enabling students to understand different sampling techniques such as random, stratified, and systematic sampling, and apply these methods to real-world geographical studies. Furthermore, students will explore the concept of correlation, learning to measure and interpret the strength and direction of relationships between geographical variables, and apply correlation techniques to address geographical challenges. Through practical exercises, students will gain hands-on experience with statistical tools and techniques, enhancing their ability to process, analyze, and present geographical data effectively. Overall, this course equips students with critical thinking and analytical skills, enabling them to integrate statistical methods with geographical analysis and communicate their findings in a structured and meaningful way.

Department of Hindi

Program Name	Paper Code	Paper Name	Course Outcome
Hindi Core (1 st Semester)	HIN0100104	Hindi sampreshan	The course focuses on enhancing understanding and application of Hindi language skills, particularly in grammar and communication. Students will learn about Hindi language structure, its usage, and significance in various contexts,

			preparing them for academic and professional proficiency. Assessment will be through internal and external exams.
Hindi core (2 nd Semester)	HIN0200104	Hindi vyakarana	The course outcome is to develop a comprehensive understanding of Hindi grammar (Vyakaran), enabling students to apply the rules effectively in both written and spoken forms. The course aims to improve overall language proficiency, critical thinking, and the ability to analyze and use Hindi in various contexts. Through internal assessments and an external exam, students will demonstrate their mastery of the subject. Ultimately, the goal is to equip students with the skills needed for academic and professional success in Hindi language usage.
SEC (1 st Semester)	SEC0110203	Spoken Hindi	The course is designed to enhance spoken Hindi skills, focusing on improving communication and fluency in the language. It aims to develop the student's ability to converse confidently and appropriately in various contexts. Through both internal and external assessments, students will demonstrate their mastery of spoken Hindi and its practical application.
SEC (2 nd Semester)	SEC0205903	Vigyapan	This course focuses on the study and application of advertising techniques in Hindi, aiming to improve the student's understanding of how language

			is used effectively in advertisements. Students will learn how to create and analyze advertisements, develop language skills specific to this field, and improve their communication techniques through both theoretical and practical assessments. The course is structured to assess students' abilities in internal and external exams.
AEC (1 st Semester)	AEC0100702	Hindi Kavya-Dhara	This course focuses on the study of Hindi poetry (Kavya-Dhara), helping students develop a deep understanding of classical and modern Hindi literature. It aims to improve the appreciation and analysis of poetic forms, themes, and literary techniques. Students will gain the skills to critically analyse and interpret Hindi poetry. The course prepares students to apply their learning in both theoretical and practical assessments, enhancing their overall literary proficiency in Hindi.

Department of History

Program Name	Paper code	Paper Name	Course outcome
History (1 st Semester)	HIS0100104	History of India (Up to 1206 CE)	Upon completion of this course the students will be able to relate the changes and transformations in polity of early India.
SEC	SEC0111403	Historical Tourism	After completion of the

(1 st Semester)		in North-East India	course the students will be able to understand various Historical and Tourist Places of N.E India and their Importance as well as their future prospect.
History (2 nd Semester)	HIS0200104	History of India (1206-1757 CE)	Upon completion of this course students will be able to understand the Political transition that took place under the Sultanate and the Mughals between 1206-1757.
SEC (2 nd Semester)	SEC0208303	Oral Culture and Oral History	After this course students will be able to espouse the relevance to the north-eastern region of India with its diverse culture and ethnic communities whose history is largely Oral.

Department of Mathematics

Program Name	Paper Code	Paper Name	Course Outcome
Mathematics Core (1 st Semester)	MAT0100104	Classical Algebra	<p>This course will enable the students to:</p> <ul style="list-style-type: none"> • Employ De Moivre's theorem in a number of applications to solve numerical problems. • Learn the basic concepts of exponential, logarithmic and hyperbolic functions of complex numbers. • Learn how to find the nature of the roots of a given polynomial equation by • Descartes' rule, also learn about symmetric functions of the roots for cubic and • biquadratic equations.

			<ul style="list-style-type: none"> • Learn how to solve cubic and biquadratic equations. • Recognize consistent and inconsistent systems of linear equations by the row echelon form of the augmented matrix. Finding inverse and rank of a matrix.
SEC (1 st Semester)	SEC0106803	Programming in C	<p>This course will enable the students to:</p> <ul style="list-style-type: none"> • Understand and apply the programming concepts of C which is important to mathematical investigation and problem solving. • Learn about structured data types in C and learn about applications in factorization of an integer and understanding Cartesian geometry and Pythagorean triples. • Use of containers and templates in various applications in algebra. • Use Mathematical libraries for computational objectives. • Represent the outputs of programs visually in terms of well formatted text and plots. • In practical students learn about the roots of a quadratic equation, solution of an equation using N-R algorithm, $\sin(x)$, $\cos(x)$ with the help of functions.
MDC (1 st Semester)	MDC0100203	MDC-1 Foundations of Mathematical Sciences-I	<p>This course will enable the students to:</p> <ul style="list-style-type: none"> • Learn about numbers, conversion of decimal numbers in binary system and binary to decimal system. • Relate indices and logarithm/antilogarithm and learn about the properties of logarithm. • Learn basic mathematical tools to solve real life problems.

			<ul style="list-style-type: none"> • Know application of mathematical tools in decision making problems.
Mathematics Core (2 nd Semester)	MAT0200104	Calculus	This course will enable the students to: <ul style="list-style-type: none"> • Understand continuity and differentiability in terms of limits. • Describe asymptotic behavior in terms of limits involving infinity. • Understand the importance of mean value theorems.
SEC (2 nd Semester)	SEC0206803	Latex	This course will enable the students to: <ul style="list-style-type: none"> • Create and typeset a latex document. • Typeset a mathematical document using latex. • Learn about creating simple pictures using latex. • Create a beamer presentation

Department of Philosophy

Program Name	Paper Code	Paper Name	Course Outcome
Philosophy Core (1 st Semester)	PHI0100104	Ancient Indian Thought	This paper gives knowledge about Indian classical epics, ancient found in the Ramayana, the Mahabharata and Vedas. It also gives knowledge about the non-Vedic systems of Indian Philosophy.
SEC (1 st Semester)	SEC0107503	Philosophical Counselling	This paper develops self-reflection, critical thinking and clarity in addressing personal and existential issues. It promotes intellectual and promotional growth.

Philosophy Core (2 nd Semester)	PHI0200104	Greek Philosophy	This paper gives knowledge about the pioneers of Greek Philosophy. It gives knowledge about the philosophies of Socrates, Plato and Aristotle in a broad manner. It incorporates the knowledge of analytical analysis.
SEC (2 nd Semester)	SEC0202703	Critical Thinking	This paper fosters among the learners analytical, problem solving and decision-making abilities. It also helps in making ethical judgements and developing effective communication skills.

Department of Physics

Program Name	Paper Code	Paper Name	Course Outcome
Physics Core (1 st Semester)	PHY0100104	Mathematical Physics and Mathematics	On successful completion of the course, students will be able to understand the calculus of vectors and concept of curved spaces which play central roles in developing insight of the theories of physics. They will learn the powerful method of computation through Dirac delta function which often appears in complex problems of physics. Students will be able to understand and apply the concepts of dynamics of particles, energy, oscillation and basic properties of matter in various problems of physics, technology and engineering. They will be trained in concept realisation through laboratory practices.
SEC (1 st Semester)	SEC0107803	Physics Workshop Skills	Objective of the course is to introduce the students to the working of physical equipment used in daily life and to repair and do maintenance of this equipment. At the end of the course the students shall be able to identify the fault, repair and do maintenance of daily use instruments.
MDC (1 st Semester)	MDC0100103	Introduction to Natural and	By the end of the course the students will have the knowledge of the structure and

		Physical Sciences	constituents of the material world, laws of nature and properties of matter.
MDC (1 st Semester)	MDC0100803	Understanding the Physical formations of the Earth	At the end of the course, the students will have knowledge on understanding the formation of earth, have knowledge about the formation of rocks, minerals and soils.
VAC (1 st Semester)	VAC0101002	Environmental Studies	On successful completion of the course, the students will be able know about the concepts of renewable and non-renewable resources, sustainable development, ecosystem, environmental pollution and laws.
Physics Core (2 nd Semester)	PHY0200104	Mathematical Physics and Electricity and Magnetism	After the successful completion of the course, students will be able to understand methods of solving various differential equations appearing in physics. It will give an idea of how to study evolution of a physical system. Through matrix algebra students will be able to compute various matrix operations which are required for solving physical problems. They will be able to understand electric field and magnetic fields in matter, dielectric properties of matter, magnetic properties of matter, application of Kirchhoff's law in different circuits, and application of network theorem in different circuits. The students will also get accustomed to using multi-meters and potentiometers, and they will be able to determine some of the important physical quantities related to electricity and magnetism for a better understanding of the topic.
SEC (2 nd Semester)	SEC0200903	Basic skills on Electronic Equipment's	Objective of the course is to make the students introduced to the working of electronic and physical equipment using in daily life and to repair and maintenance of this equipment. At the end of the course the students shall be able to identify the fault, repair and do maintenance of daily use electronics/mechanical instruments.
MDC (2 nd Semester)	MDC0200803	Understanding the changing Environment	At the end of this course, the students will be able to understand environmental degradation due to pollution and the solutions to slow down such degradation.

Department of Political Science

Program Name	Paper Code	Paper Name	Course Outcome
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Political Science (1 st Semester)	POL0100104	Introduction to Political Theory	This course will enable the students to have an in-depth knowledge of the key concepts in political theory, application of such concepts, its limitations and related conceptual categories. It will develop critical thinking among young minds on functioning of political system and also lay the foundation for understanding the contemporary political developments in future.
SEC (2 nd Semester)	SEC0107203	Panchayati Raj in Practice	This paper will help students understand the importance of grassroot political institutions in empowering people. It will highlight the complex challenges faced the Panchayati Raj Institutions in India and mechanisms involved to make it more participatory and inclusive in nature.
MDC (1 st Semester)	MDC0100503	Humanities and Social Sciences-I: -Makers of Modern Assam	This course will provide invaluable insights of the history, culture and socio-political evolution of Assam. They will understand the historical transformation of Assam, cultural revival of the region, socio-economic reforms, political awakening and leadership.
Political Science (2 nd Semester)	POL0200104	Indian Government and Politics	The students will develop an understanding of the legacy of national movement, the principles for the formation and functioning of the Constituent Assembly of India. It will encourage critical analysis of working of Indian democracy. They can have basic idea about the constitutional provisions related to the legislative procedures in Indian Parliament, changing character of federalism in India and the role of states.
VAC (2 nd Semester)	VAC0201102	United Nations and Human Rights	The students can acquire knowledge of the origin, development, structure, role and relevance of the United Nations. They can also understand the concept of Human Rights, its instruments, role of UN in Human Rights protection and the practical

			applications of the course.
SEC (2 nd Semester)	SEC0202303	Conflict and Peace Building	The course seeks to understand the concept of conflict, its different forms, conflict resolution and peace building. It will develop critical thinking through the approaches to the study of peace and its practical application to bring peace in the society.

Department of Sanskrit

Program Name	Paper Code	Paper Code	Course Outcome
Sanskrit Core (1 st Semester)	SAN0100104	Introduction to Sanskrit	This paper gives the knowledge of Vedic and classical Sanskrit literature. This paper also develops the knowledge of Indian scriptures and the history and background of Sanskrit language and Devnagri script.
AEC (1 st Semester)	AEC0100502	Basics of Sanskrit Communication	This paper gives the knowledge of scientific background of Sanskrit Alphabets, Vedic Svaras, Pronunciation of Sanskrit sounds. It also develops the Sanskrit speaking skill of students.
Sanskrit Core (2 nd Semester)	SAN0200104	Functional Sanskrit and Yoga	This paper gives the knowledge of Indian value system. This paper also provides the knowledge of Yoga, the importance of Philosophy, the knowledge of self- control and self-management.

Department of Statistics

Course Outcome for the 1st Semester and 2nd Semester (NEP-2020)

Program Name	Paper code	Paper Name	Course outcome
Statistics Core	STA0100104	Descriptive	Unit1: Statistical Methods:

(1 st Semester)		Statistics & Probability	<p>Definition and scope of Statistics, concepts of statistical population and sample, types of data, attribute, variable, scale of measurement, presentation of data including tabular graphical, primary and secondary data and their collection methods</p> <p>Unit 2: Measures of central tendency, Dispersion and location: Mathematical measures of central tendency and Dispersion, Coefficient of variation, Moments, Skewness, Kurtosis, Deciles, percentiles, quartiles</p> <p>Unit 3: Probability: Introduction, random experiments, sample space, events, Definition of probability- classical, statistical, axiomatic, conditional probability, Theorems of probability, Bayes theorem and its applications</p> <p>Unit 4: Random Variables and Expectations: Discrete and continuous random variables, p.m.f, p.d.f and c.d.f and Expectation of univariate random variables.</p> <p>Unit 5: Practicals on Descriptive Statistics part. At the end of the course, students will be able to analyses a data set, represent the data in tabular and diagrammatic form, prepare the frequency distribution, find the summary measures viz. the measures of central tendency and dispersion.</p>
SEC (1 st Semester)	SEC0102603	Data Collection and presentation	<p>This course helps students in understanding use of data, presentation of data using computer software like MS-Excel. Students will be involved practically to preparation of questionnaires/interview schedules, collection of both primary and secondary data and its presentation. Students will also be asked to prepare a report on collected data and will be evaluated accordingly.</p> <p>Course Outline:</p> <ol style="list-style-type: none"> 1. Use of Data Use of data in social sciences, types and sources of data, data collection methods, Census vs sample surveys and Random sampling 2. Questionnaire and Schedule

			<p>Meaning; how to prepare a questionnaire and interview schedule and uses for data collection.</p> <p>3. Presentation of Data Data presentation in tabular format, diagrams, graphs also all these formats in MS-excel.</p>
MDC (1 st Semester)	MDC0100203	MDC-1 Foundations of Mathematical Sciences-I	<p>This course will enable the students to:</p> <ul style="list-style-type: none"> • Learn about numbers, conversion of decimal numbers in binary system and binary to decimal system. • Relate indices and logarithm/antilogarithm and learn about the properties of logarithm. • Learn basic mathematical tools to solve real life problems. • Know application of mathematical tools in decision making problems. • Acquire the skill of statistical analysis of data from real life situation in a scientific manner. • Acquire knowledge on the basic aspects of statistical reasoning and drawing conclusions.
Statistics Core (2 nd Semester)	STA0200104	Correlation & Regression, Probability Distributions, Statistical Inference-I & Finite Difference	<p>Unit1: Bivariate data Analysis: Definition, Scatter Diagram, Karl Pearson's correlation coefficient and its properties, Partial and multiple correlation, rank correlation, correlation ratio, simple linear regression, Principle of least squares.</p> <p>Unit2: Basic probability distributions: Standard probability distributions: Binomial, Poisson, Uniform, Normal. Fitting of these distribution</p> <p>Unit 3: Testing of hypothesis: Null and alternative hypotheses, level of significance, Type-I and Type-II errors, critical region, size and power, large sample and small sample tests- t-test, F-test.</p> <p>Categorical data Analysis, independence of attributes goodness of fitting using Chi-square Test.</p> <p>Unit 4: Finite Difference: Definition, Operators, difference table, Newton's</p>

			<p>Forward and Backward interpolation formula, Divided difference: definition, DD table and DD formula, Lagrange's interpolation formula, GQF, Trapezoidal, Simpsons $1/3^{\text{rd}}$ and $3/8^{\text{th}}$ formula, Newton Raphson Method.</p> <p>Unit 5: Practicals on all the Topics.</p> <p>At the end of the course, students will be able to apply the tools of correlation and model building in data analysis along with learning the use of basic probability distributions.</p>
SEC (2 nd Semester)	SEC0210503	Statistical Techniques for Research Methods	<p>This course is designed to provide students with the knowledge of representation and analysis of data with the help of various statistical tools. This paper will form a base for future research work of students irrespective of subject and discipline.</p> <p>After studying this course students will</p> <ul style="list-style-type: none"> • Understand the basic concepts and presentation of data • Have the concepts of different characteristics of a data set like; Average, Standard Deviation, Coefficient of Variation, Quartiles. • Be able to perform t-test, z-test and chi-square tests wherever necessary for a data set. • Be able to draw statistical inference and interpret the result in an applied context.
MDC (2 nd Semester)	MDC0200203	MDC-2 Foundations of Mathematical Sciences-II	<p>This course will enable the students to:</p> <ul style="list-style-type: none"> • Understand the truth and false of a logical statement and solve logical problems of real-life situation. • Learn combinatorial ideas to solve algebraic and real-life problems. • Learn techniques to solve daily life problems. • Develops aptitude for applications of statistical techniques in social sciences and humanities.

Department of Zoology

Program Name	Paper Code	Paper Name	Course outcome
Zoology Core (1 st Semester)	ZLG0100104	Diversity of non-chordates	It is aimed to introduce students to lower and higher non chordates, their characteristics, classification and important members including Practical's to study live and museum specimens.
Zoology Core (2 nd Semester)	ZLG0200104	Diversity of Chordates	It gives basic and fundamental knowledge of chordate animals of the living world and include Practicals to study live and museum specimens.
SEC (2 nd Semester)	SEC0210103	Sericulture and its prospects	It gives an idea of various aspects Sericulture with special reference to the Northeast so that students learn about them and can become practise.

Department of B.VOC

Program Name	Paper Code	Paper Name	Course Outcome
AEC	AEC0100102	Assamese	Helps to knowledge gain on Assamese grammar, pronunciation etc.
AEC	AEC0100402	English Alt	Helps to improve spoken and written skill of English.
SEC	SEC0107003	Ornamental Fish and Fisheries	Learn about ornamental fishes and plants, preparation of home aquarium and its maintenance etc.

	SEC0100603	Arts of Acting	Learn about acting, types of acting and gaining knowledge on acting skills.
MDC	MDC0100403	Basics of Commerce and Management.	Learn about how to start business, partnership and marketing etc.
	MDC0100603	ICT	Learn about computer applications and technologies etc.

Library Science

Program Name	Paper Code	Paper Name	Course outcome
MDC	MDC0100303	Foundations of Library and Information Science	After completion of the course, students will get acquainted with Library & Information Science as subject and its different dimensions, will able to know the role played by different organizations in the development of libraries and library related rules, regulations and acts.
MDC	MDC0200303	Information Sources and Services	After completion of the course the learners will be aware of different sources of data and information and also acquainted with the different services provided by libraries and knowledge centers. The students will able to grasp the process involved in providing reference and information services.

ANANDARAM DHEKIAL PHOOKAN COLLEGE

Course Offered Under CBCS Syllabus

BA MAJOR PROGRAMME OUTCOME IN ASSAMESE

3rd Semester:

Paper: 3016(General Study of Assamese Literature)

In this paper some selected essays are included to open the route for the students to taste the *rasa* of literature.

Paper: 3026(Assamese poetry)

This paper introduces the students to the trend of Assamese poetry since the period of pre-Sankaradeva to the development of modern period.

Paper: 3036 The culture of Assam

This paper is aim to give a basic knowledge about the social customs, religious tradition, festivals, performing art form, sculpture and painting of the people of Assam.

4th Semester:

Paper: 4016(Comparative Indian Literature)

This paper enhances the knowledge of the students about the background and primary concept of comparative literature besides an introduction to some significant Indian writings.

Paper: 4026(Acculturation of Assamese Language: Aryan and non-Aryan languages)

This paper aimed to enhance the understanding regarding the relationship between the Assamese and other Aryan languages like Sanskrit, bangle etc. moreover, the impact of non-Aryan languages of Assam on the structure of Assamese language.

Paper: 4036(Assamese prose literature)

This paper focus on the basic concept of emergence and development of the Assamese prose and gives a sample texts from Sankaradeva to Historical chronicles.

5th Semester:

Paper: ASM-HC-5016(Assamese Drama and Performing Style)

This paper aims to give the students an outline idea of the History of Assamese Drama as they study few representative places and the style of performance.

Paper: ASM-HC-5026(Assamese Grammar)

This paper aims to teach the students grammatical analysis of the Assamese Language following the higher grammar.

Paper: ASM-HE-5026(Assamese Romantic Poetry)

The objectives of the paper to make students familiar with the different phases of Assamese Romantic Poetry of the last part of nineteen century.

Paper: ASM-HE-5036(Sankardeva Studies)

The objectives of the paper to makes student familiar with the extraordinary talent of Sankardeva and his creations like Bargeet, Kirtana Ghosa and his plays.

6th Semester:

Paper: ASM-HE-6016(Lakhsimanth Bezbarua)

The aim of this paper is to give an introduction to creative and reflective writings of Lakhsminath Bezbarua.

Paper: ASM-HE-6026(Banikanta Kakati)

The aim of this paper is to give a critical and reflective writings of Banikanta Kakati.

Paper: ASM-HE-6036(Assamese children's and young adult literature)

The aim of this paper is to introduce the student 's to poems, verse, folktales, plays, essays andepics meant for children / teenager.

Paper: ASM-HE-6046(The Dialects of Assamese language)

The paper Encompasses Discussions related to regional and social dialects of Assamese. It also tries to help the students by incorporating sample lessons from such varieties.

MA PROGRAMME OUTCOME IN ASSAMESE

3rd Semester:

Paper: ASM 3016(Assamese Novel: 1890-2015)

1. Categories the Assamese novels into different trends.
2. Explain the effects of the socio-political development on Assamese novels.
3. Designs a spectrum of different themes used in Assamese novels.

Paper: ASM 3026(Translation: Theory and Practice)

1. Illustrate the linguistic and cultural aspects of translation.
2. State the problems of different kinds of translation.
3. Justify the quality of different texts of translation.

Paper: ASM 3066(Varieties of the Assamese Language)

1. Describe different varieties of the Assamese Language in the context of contemporary Linguistics.
2. Organize geographical and social varieties of Assamese Language.

Paper: ASM 3096(Assamese Vaisnavite, Saiva and Sakta Literature)

1. Categories religious literature of Assam and compare Assamese Vaisnavite literature with Assamese Saiva-Sakta literature.
2. Elaborate the concept of Vaishnavism, Saivism and Saktaism and Organize literary products under titles like Vaishnava, Sakta and Saiva literature.
3. Interpret religious beliefs i.e. Vaishnava, Saiva and Sakta with keeping in mind their humanitarian outlook.
4. Generate human values out of the religious outlook prevalent in Assam.

Paper: ASM 3106(Structure of the Assamese Language)

1. Describe the intricate structure of the Assamese Language.
2. Analyses language in sync with contemporary linguistics.
3. Design a synchronic study of the structure of Assamese Language.

4th Semester:

Paper: ASM 4016(Textual Criticism and Manuscript Reading)

1. Explain the Manuscript tradition in different part of the world.
2. Explain mutilated text in restored.
3. Generate interest in preservation and restoration of intellectual heritage of a nation

Paper: ASM 4026(Applied Linguistics)

1. Explain computational linguistics.
2. Plan to review literature applying discourse analysis.
3. State the tools for analyzing the Assamese language.

Paper: ASM 4046(Assamese Short Story:1889-2015)

1. Trace the development of the major trends of Assamese short stories.
2. Describe the emotional effect of reading a few significant Assamese short stories.
3. Interpret a short story.

Paper: ASM 4096(Assamese Criticism)

1. Grasp the history and trends of Assamese criticism.
2. Trace the influence of western and Indian criticism on Assamese criticism.
3. Produce a criticism of a text.

Paper: ASM 4116(Tibeto Burman Language)

1. Illustrate the Linguistics features of Tibeto Burman Language of Assam.
2. Trace the differences among Rabha,Boro,Mising,Karbi communities and compare the Tibeto Burman Language with Assamese and other Indio-Aryan Language.
3. Describe the influence of Tibeto Burman Language on the Assamese Language and vise-versa.

BA MAJOR PROGRAMME OUTCOME IN ARABIC

3rd Semester:

Paper: ARA-HC-3016, C-5(Classical Arabic Prose and Poetry-I)

The paper highlighted a selection of short stories, conversations and a selection of classical Arabic poetry

Paper: ARA-HC-3026, C-6(Political History of the Arabs-II)

The paper emphasizes on the Political history of the Arabs; it helps the students to learn about the socio-economic condition and election system of the khulafa-e-Rashideen.

Paper: ARA-HC-3036, C-7(Applied Grammar-II)

It imparts the core knowledge of Arabic Grammar along with application and designing of sentence and analysis.

Paper: ARA-SE-3014, SEC-I(Spoken Arabic-I)

It imparts the basic and fundamental knowledge of Arabic Language, reading and writing skill, vocabulary enrichment, and basic grammar and conversation practice.

4th Semester:

Paper: ARA-HC-4016, C-8(Modern Arabic Prose and Poetry-I)

It helps the students to learn about the Modern Arabic prose and poetry through the stories, dramas and romantic poetries and their writers.

Paper: ARA-HC-4026, C-9(Political History of the Arabs-III)

The paper highlights about the caliphate of Uthman and Ali and their socio-economic, religious, cultural and administrative services to the community.

Paper: ARA-HC-4036, C-10(Applied Grammar-III)

It helps the students to learn about vowel points and its uses to the different types of sentences and formation and signs of noun, pronoun, verb, adjective, numbers and genders with applications.

Paper: ARA-SE-4014, SEC-II (Spoken Arabic-II)

The paper highlights about the basic grammar like pronouns and possessive and their uses, basic structure of sentence, subject and predicate and reading and writing skill as formation of words and using them in sentences, writing practice, reading comprehension, typing Arabic alphabet, vocabulary enrichment and conversation practice.

5th Semester:

Paper: ARA -HC-5016(Classical Arabic Prose and Poetry-II)

It imparts the knowledge of development of Arabic Prose and Poetry in Pre-Islamic, Islamic and Abbasid Period.

Paper: ARA-HC-5026(History of Arabic Literature-I)

It imparts the knowledge of origin and development of Arabic Prose and Poetry in Pre-Islamic Period.

Paper: ARA-HE-5016(Functional Arabic-1)

It imparts the knowledge of how Arabic language is used in daily life activities.

Paper: ARA-HE-5026(Applied Grammar-IV)

It imparts the knowledge of Arabic grammar and its application in writing and speaking.

6th Semester:

Paper: ARA-HC-6016(Modern Arabic Prose and Poetry-II)

It imparts the knowledge of development of Arabic Prose and Poetry in Modern Period.

Paper: ARA-HC-6026(History of Arabic Literature-II)

It imparts the knowledge of development of Arabic Prose and Poetry in Early Islamic Period.

Paper: ARA-HE-6016 (Functional Arabic-II)

It imparts the knowledge of how Arabic language is used at home, office, market etc.

Paper: ARA-HE-6036(Translation, Comprehension and composition)

It helps to develop creativity and improve understanding level of the student.

BA MAJOR PROGRAMME OUTCOME IN BENGALI

3rd Semester:

Paper: BEN-HC-3016: Lokosanskriti o Lokosahittya

It imparts the knowledge of Folk Culture and Literature of Bengal

Paper: BEN-HC-3026: Chando,Alankar o Prachya Kavyatattya

It imparts the knowledge of Literary Aspects

Paper: BEN-HC-3036: Bangla Sahittyer Itihas(Prachin o Madhyajug)

It imparts the knowledge of Ancient and Mediaeval History of Bengali Literature

4th Semester:

Paper: BEN-HC-4016: Bangla Sahittyer Itihas(Adhunikjug)

It imparts the knowledge of Modern History of Bengali Literature

Paper: BEN-HC-4026: Adunik Bangla Sahittya: Suchana Parba

It imparts the knowledge of Modern History of Bengali Literature

Paper: BEN-HC-4036: Rabindra Sahittya

It imparts the knowledge of Poetry and Fictional Literature of Rabindranath Thakur

5th Semester:

Paper: BEN-HC-5016(Modern Bengali Literature: Pre-independence structure)

It imparts the knowledge of Modern Poetry, Novel, and Discourse.

Paper: BEN-HC- 5026(Modern Bengali Literature: Post-independence structure)

It imparts the knowledge of Modern Short-Stories, Poetry and Drama in Bengali Literature

Paper: BEN-HE- 5016(Children's and Juvenile Literature)

It imparts the knowledge of Rhyme, Fairytale and Novel in Bengali Literature

Paper: BEN-HE-5026(Biographical Literature and Reminiscences)

It imparts the knowledge of Biographical Literature and Reminiscences in Bengali Literature

6th Semester:

Paper: BEN-HC-6016(Literary Theory and Identity)

It imparts the knowledge of literary theory in Bengali Literature

Paper: BEN-HC-6026(Western Literary Theory and Criticism)

It imparts the knowledge of western literary theory and criticism in Bengali Literature

Paper: BEN-HE-6016(North-Eastern Bengali Literature)

It imparts the knowledge of Prose, Poetry, Drama, Novel and Short-stories of North-Eastern literature

Paper: BEN-HE-6036(Research/ Seminar Paper Writings)

It imparts the knowledge of how to write the Research /Seminar Paper etc.

BA REGULAR PROGRAMME OUTCOME IN BENGALI

3rd Semester:

Paper: BEN-HG-3016/ BEN-RC 3016 (HG for Honors and RC for Regular Course)

It imparts the knowledge of Modern Bengali Texts

Paper: BEN-CC-3016 (For Regular Course)

It imparts the knowledge of Modern Bengali Poetry

4th Semester:

Paper: BEN-SE-4014 (For Honors & Regular Course)

It imparts the knowledge of Proofreading

Paper: BEN-HG-4016/ BEN-RC 4016 (HG for Honors & RC for Regular Course)

It imparts the knowledge of Modern Bengali Texts

Paper: BEN-CC-4016 (For Regular Course)

It imparts the knowledge of Modern Bengali Texts

For Non CBCS Syllabus

Paper 5.1 Bangla Bhashar Itihas o Chanda-Olankar

It imparts the knowledge of History of Bengali Language and Literary Aspects

Paper 5.2 Upannyas Galpo Natak

It imparts the knowledge of Modern Bengali Literature

Paper 6.1 Rabindranath1/Rabindranath2

It imparts the knowledge of Rabindranath Tagore 's Literature

Paper 6.2 Aasamer Bangla Sahittya/Pratibeshi Sahittya

It imparts the knowledge of various Bengali Literature of Assam and Assamese-Odiya Modern Literature

BA & B.Sc MAJOR PROGRAMME OUTCOME IN ECONOMICS

3rd Semester

Paper 5: ECO-HC-3016(Intermediate Microeconomics-I)

This paper looks at the behavior of the consumer and the producer and also covers the behavior of competitive firm.

Paper 6: ECO-HC-3026(Intermediate Macro Economics-I)

This paper introduces the various theoretical issues related to an open economy.

Paper 7: ECO-HC-3036(Statistical Methods for Economics)

This paper is on statistical methods for economics. It begins with some basic concepts and terminology that are fundamental to statistical analysis and inferences.

4th Semester

Paper 8: ECO-4016(Intermediate Micro Economics II)

The paper covers general equilibrium and welfare, imperfect markets and topics under information Economics.

Paper 9: ECO-HC-4026(Intermediate Macro Economics- II)

The paper introduces to the long run dynamic issues like growth and technical progress.

Paper 10: ECO-HC-4036(Introductory Econometrics)

This paper provides a comparative introduction to basic econometric concepts and techniques. It covers statistical concepts of hypothesis testing, estimation and diagnostic testing of simple and multiple regression models.

5th Semester**Paper: ECO-HC-5016(DEVELOPMENT ECONOMY-1)**

This paper reviews major trends in economic indicators and policy debates in India in the post-independence period with particular emphasis on paradigm shifts and turning points.

Paper: ECO-HC-5026(DEVELOPMENT ECONOMICS-1)

This paper helps in learning the alternative conceptions of development and their justification.

Paper: ECO-HE-5016(ECONOMICS OF HEALTH AND EDUCATION)

The paper provides a microeconomic framework to analyze, among other things, individual choice in the demand for health and education, government intervention and aspects of inequity and discrimination in both sectors. It also gives an overview of health and education in India.

Paper: ECO-HE-5026(MONEY AND FINANCIAL MARKETS)

This course exposes students to the theory and functioning of the monetary and financial sectors of the economy. It highlights the organization, structure and role of financial markets and institutions.

Paper: ECO-HE-5036(PUBLIC FINANCE)

This paper helps in understanding an overview of government finances with special reference to India. This paper does not require any prior knowledge of economics.

6th Semester**Paper: ECO-HC-6016(INDIAN ECONOMY-11)**

This paper examines sector-specific policies and their impact in shaping trends in key economic indicators in India. It highlights major policy debates and evaluates the Indian empirical evidence.

Paper: ECO-HC-6026(DEVELOPMENT ECONOMICS-11)

This paper helps us in learning the second module of the economic sequence. It begins with basic demographic concepts and their evolution during the process of development.

Paper: ECO-HE-6016(ENVIRONMENTAL ECONOMICS)

This paper focuses on economic causes of environmental problems. Economic implications of environmental policy is also addressed as well as valuation of environmental quality, quantification of environmental damages, tools for evaluation of environmental projects such as cost-benefit analysis and environmental impact assessments.

Paper: ECO-HE-6026(INTERNATIONAL ECONOMICS)

This paper develops a systematic exposition of models that try to explain the composition, direction and consequences of international trade, and the determinates and effects of trade policy.

BA MAJOR PROGRAMME OUTCOME IN EDUCATION**3rd Semester:-**

Paper:EDU-HC-3016 (Development of Education in India II) This course aims to explain the recommendations of and educational importance of different committees and commissions.

Paper:EDU-HC-2026 (Educational Technology & Teaching Methods) The expected outcome of the course is to make the students understand about the importance of technology in education. To acquaint the students with the application of ICT in education.

Paper:EDU-HC-3036 (Value and Peace Education) Another expected outcome of the course is to make the students identify the skills of promoting peace education and understand the concept of value and its importance.

Paper:EDU-HG-3016 (Guidance and Counseling) To enable the students to acquire the skills of guidance and counseling as a teacher. The course enables the students to acquire the skills of public speaking.

Paper:EDU-SEC-3014 (Public Speaking Skill) This course aims to impart the students the techniques and skills of excellent Public Speaking.

4th Semester:

Paper:EDU-HC-4016 (Great Educational Thinkers) This course aims to enlighten the students with the philosophy of great educational thinkers.

Paper:EDU-HC-4026 (Educational Statistics & Practical) To develop the basic concept of statistics and their importance in education.

Paper:EDU-HC-4036 (Emerging Issues in Education) To address the emerging trends and problems in the educational field.

Paper: EDU-HG- 4016 (History of Education in India)

This course also aims to make the students enable to analyze the different policies in the history of Indian education and to analyze the recommendations of various committee and commissions in Pre and Post Independent India.

Paper: EDU-SE-4014 (Writing Bio-Data and Facing an Interview) This course aims to learn the students the skills of writing a bio data properly.

5th Semester:

Paper:EDU-HC-5016(MEASUREMENT AND EVALUATION IN EDUCATION AND PRACTICAL)

This paper enables the student to understand the concept of measurement and evaluation in education. Paper also teaches the construction of standardize test to measure various types of traits of an individual. Students also acquaint with personality test and aptitude test.

Paper: EDU-HC-5026 (GUIDANCE AND COUNSELLING)

It helps the students to understand the concept, needs and importance of guidance and counselling. Paper also acquaints the students with the organization of guidance service and school guidance clinic. It helps the learners to understand the challenges faced by the teacher as guidance worker.

Paper:EDU-DSE-5016(CONTINUING EDUCATION)

Paper develops the concept, objectives and significance of continue education in the context of present scenario. It also teaches about concept of open school and open universities in continue education. It helps to understand the development of adult education in India.

Paper:EDU-DSE-5046(TEACHER EDUCATION IN INDIA)

Paper helps to understand the significance of teacher education. Students also acquaint with different organizing bodies of teacher education in India and their functions in different level of education. Through this paper students are also able to critically analyse the status of teacher education in India.

6th Semester:

Paper: EDU-HC-6016 (EDUCATION AND DEVELOPMENT)

Paper helps to understand the relation between education and development along with development in the post globalisation era. Its teachers about human resource development and economic and political awareness through education.

Paper: EDU-SC-6026 (PROJECT)

This paper purely experimental in nature. It explains the process of conducting a project. Paper makes the students acquaint with prepare a project report.

Paper: EDU-DSE-6026(SPECIAL EDUCATION)

Paper helps to understand the meaning and importance of special education. Paper familiarizes the student's it the different types of special children with their characteristics. It enables the students to know about different issues, educational provisions and support service of special education.

Paper: EDU-DSC-6036(EDUCATIONAL MANAGEMENT)

Paper develops and understanding of the basic concept of educational management. It enables the students to understand the concept and importance of educational planning. It also helps to know financial resources and financial management in education.

BA MAJOR PROGRAMME OUTCOME IN ENGLISH

3rd Semester:

Paper: ENG-HC-3016 (History of English Literature and Forms)

This paper aims at introducing students to the History of English Literature and the major literary forms by adopting a chronological approach to the study of poetry, drama, fiction and non-fictional prose.

Paper: ENG-HC-3026 (American Literature)

This paper seeks to acquaint the students with the main currents of American literature in its social and cultural contexts.

Paper: ENG-HC-3036 (British Poetry and Drama: 17th and 18th Centuries)

This paper aims to familiarize the students with British literature in the 17th and 18th centuries, a time period which sees the emergence and establishment of greatly diverse kinds of writings.

4th Semester:

Paper: ENG-HC-4016 (British Literature: The 18th Century)

This paper aims to familiarize the students with British literature in the 18th century, an age in which reason and rationality dominated. This age saw the publication of some of the best novels and works of non-fictional prose and poetry in the English language.

Paper: ENG-HC-4026 (British Romantic Literature)

This paper aims to introduce students with the Romantic imagination, expressing itself most memorably in the poetry of Blake, Burns, Wordsworth, Coleridge, Shelley and Keats.

Paper: ENG-HC-4036 (British Literature: The 19th Century)

This paper tries to expose the students to the ground-breaking efforts of the poets as well to the works of fiction writers who manage to consolidate and refine upon the achievements of the novelists of the previous era.

5th Semester:

Paper: ENG-HC-5016 (British Literature: The 20th Century)

This paper gives introductions to the spirit of modernism, with its urgent desire to break with the codes and conventions of the past, experiment with new forms and idioms, and its cosmopolitan willingness to open itself up to influences coming from other shores.

Paper: ENG-HC-5026 (Women's Writing)

This paper seeks to direct the students' attention to nineteenth and twentieth century writings by women living in different geographical and socio-cultural settings. Students will get acquainted with the situationally distinct experiences of women articulated in a variety of genres-poetry, novels, short stories, and autobiography, while the selections from Mary Wollstonecraft-the only 18th century text prescribed, will acquaint students with the ideas contained in one of the earliest feminist treatises of the western world.

Paper: ENG-HE-5036 (Literature of the Indian Diaspora)

This paper will look at the diasporic experience, such as ideas of transnationalism, exile, migration, displacement, and so on with particular reference to Indian diasporic writers.

Paper: ENG-HE-5056 (Literary Criticism and Literary Theory)

This paper will familiarize students with some important texts on literary criticism and literary theory. Beginning from William Wordsworth's Preface to the Lyrical Ballads the purpose will be to inform the students on the shifts in literary interpretations and critical approaches so as to equip them while reading texts across genres.

6th Semester:-

Paper: ENG-HC-6016 (Modern European Drama)

The paper aims at introducing students to the innovative dramatic works of playwrights from different locations in Europe, which taken together represents the wide range of modern drama and its fortunes on the written page and the stage.

Paper: ENG-HC-6026 (Postcolonial Literatures)

This paper gives the students an opportunity to acquaint themselves with some of the novels, short stories and poems from postcolonial literatures across the world, with the texts showcasing the many regional, cultural differences and peculiarities, as well as common and shared experiences of the postcolonial condition.

Paper: ENG-HE-6016 (Literature and Cinema)

This paper introduces students with Theories of Adaptation • Transformation and Transposition • Hollywood and Bollywood • Adaptation as Interpretation

Paper: ENG-HE-6036 (Partition Literature)

This paper gives the students an opportunity to acquaint themselves with some pieces of literature that chronicle and explore the event of partition and highlight various aspects of Colonialism and Nationalism • Communalism and Violence • Homelessness and Exile • Women in the Partition etc.

BA MAJOR PROGRAMME OUTCOME IN GEOGRAPHY

3rd Semester:

Paper: GGY-HC-3016(Economic Geography)

This paper will enhance our student to learn about World Economic Pattern and Resources.

Paper: GGY-HC-3026(Geography of India with special reference to North East India)

This paper is essentially a Regional Geography of India and North- East India. It will develop the geographical understanding of location, Physiography, Soil, Climate, Population etc.

Paper: GGY-SE – 3024(Skill Enhancement Course)

Thematic Cartography: This paper covers the Thematic Map Making course. This will develop our students to understand data visualization through Maps.

4th Semester:

Paper: GGY-HC-4016(Environmental Geography and Disaster Management)

This paper will cover Man-Environmental relationships. In this context It also give emphasis on Disaster Management and Preparedness.

Paper: GGY-HC-4026(Population and Settlement Geography)

Demography is an essential entity into the subject of Geography. In this paper, students will learn demographic patten of the world.

Paper: GGY-HC-4036(Remote Sensing Techniques and GIS)

This is a skill-based paper and students will be associated with the basic understanding of Geoinformatics. How Satellite imagery is acquired and stored for accurate map designing is a part of this chapter

Paper: GGY - SE - 4024:

Surveying Techniques Land Surveying with the help of Plane Table and Prismatic Compass will be tough. In addition to that students will also to be learned the use of GPS in land mapping.

5th Semester:

Paper: GGY-HC-5016(Social and Political Geography)

This course will help equip the students to comprehend various social and political aspects of phenomena and their interface within the realm of geography.

Paper: GGY-HC-5026(Field Techniques in Geography)

This course will help students to proceed with a research problem and the steps she/he should adopt and the tools and craft to be employed for doing quality research.

Paper: GGY-HE-5046(Agricultural Geography)

To understand how different types of agriculture have developed in different areas and how they are similar to or different from one another.

Paper: GGY-HE-5036(Urban Geography)

It seeks to develop new insights among students on the relevance of an urban geography and associated problems in a rapidly urbanizing world.

Paper: GGY-HC-6016(Geographical Thought)

This course presents contemporary and post- modern perspectives, along with the models that act as a guiding force of the discipline to understand various geographical phenomena in proper perspectives.

Paper: GGY-HC-6026(Research Methods in Geography and Project Work Paper)

To understand how to approach a research problem and to formulate research objectives and research questions in proper perspective. In addition, knowledge of formulation of hypothesis and testing, framing of questionnaires, techniques of collection of both qualitative and quantitative data and their analysis.

Paper: GGY-HE-6036(Geography of Tourism Paper Code)

This paper introduces the students to the field of tourism from the lens of geography and its specificities. It seeks to develop new insights among students on how tourism and allied activities are shaped by geography by an area.

BA MAJOR PROGRAMME OUTCOME IN HINDI

3rd Semester:

Paper: HIN-HC-3016(Chhayavadottar Hindi Kavita)

It imparts the knowledge of post chhayavadi poets and their contribution in Hindi literature & Chhayavadi poet in Hindi literature.

Paper: HIN-HC-3026(BharatiyaKavyashastra)

It imparts the knowledge of Indian Hindi kavya and Rhetorical application.

Paper: HIN-HC-3036(Pashchatya kavyashastra)

It imparts the knowledge of western kavyashastra

4th Semester

Paper: HIN-HC-4016 (Bhasha vijñan, Hindi Bhasha evam Devnagari Lipi)

It imparts the knowledge of dhvani vijñan , bhasha, vakya vijñan, vakya parivartan ke karan

Paper: HIN-HC-4026(Hindi Katha Sahitya)

It imparts the knowledge of Fiction is any creative work (chiefly, any narrative work) consisting of people, events, or places that are imaginary—in other words, not based strictly on history or fact.

Paper: HIN-HC-4036 (Hindi Natak Evam Ekanki)

Its imparts the knowledge natak avam ekanki ,paribhasa ,tatwa evam prakar , hindi natak evam ekanki sahitya ka udbhav aur vikas

5th Semester:

Paper: HIN-HC-5016 (Hindi nibadh avam anaye gadye vidhaye)

This paper enhances the information about the nature of Hindi essay, memoir, sketch and history of Hindi essay literature, it is the main goal of this paper to acquaint them with the artistic features of these effective prose genres through selected compositions.

Paper: HIN-HC-5026(Proyajonmulok Hindi)

This paper aimed to give information to the students about the various forms of Hindi language and various constitutional provisions related to Hindi, as well as to make them well acquainted with the purposeful forms of Hindi which used in the context office, science, business, media & etc. They can find livelihood in this field is the main goal of this paper.

Paper: HIN-HE-5016 (Lok sahitya chintan)

This paper enhances the knowledge of folk literature and cultures of the people which introduce the oral tradition, fairy tales, fables, folk songs, festivals, rituals, performing art form, educate people & protect the culture in every society.

Paper: HIN-HE-5026 (Hindi ki rastriya sanskritik kavyadhara)

This paper aimed to enhance the feelings of nationalism and cultural consciousness among the students by introducing them to the history of the rich national cultural poetry stream of Hindi and captivating compositions of selected poets of this stream.

6th Semester:-

Paper: HIN-HC-6016 (Hindi ki sahitik patrkarikta)

The main goal of this paper is to make the students well acquainted with nature of literary journalism and the literary journalism of Hindi which has flowed continuously from the Bhartendu era till now show that they can seek livelihood in this field.

Paper: HIN-HC-6026 (Hindi prajana karya) HINDI PROJECT WORK

This paper introduced the awakened research instinct of the students, to encourage their ability to critically review, as well as to motivate them to use technology in the form of DTP, power point presentation.

Paper: HIN-HE-6016 (Chayavadi kavyadhara)

The main goal of this paper is to make the students familiar with the history of the Chayavadi poetry stream of Hindi, the selected poetic poems, sensation and artistic features of this unique poetry stream.

Paper: HIN-HC-6026 (Premchand ka sahitya)

Giving the students general information about the literature composed by the great Hindi story writer Munshi Premchand, through special study of selected works (novel, drama, essay, stories) to make them well acquainted with popular literature is the main aim of the paper.

BA MAJOR PROGRAMME OUTCOME IN HISTORY

3rd Semester:

Paper: HIS-HC-3016 (History of India III (c 750- 1206))

This course aims to acquaint the students the socio-political formation and administrative patterns of the early medieval Indian society.

Paper: HIS-HC-3026 (Rise of the Modern West I)

This course aims to explain the political and intellectual currents in Europe in the pre-modern age.

Paper: HIS-HC-3036 (History of India IV (c 1206-1550))

After completion of the course, the students will be able to explain and reconstruct the lineage of the history of India under the Sultanate period.

Paper: HIS-SE- 3014 (Historical Tourism in North East India)

The course aims to explain the students the evolution and importance of the tourist places and their prospect in the north eastern part of India.

4th Semester:

Paper: HIS-HC-4016 (Rise of Modern West II)

This course aims to explain the political and intellectual currents in Europe in Modern Age.

Paper: HIS-HC-4026 (History of India V (c 1550-1605))

This paper attempts to explain the political, economic and socio-cultural reconstruction of India under the rule of the Mughal emperors.

Paper: HIS-HC-4036(History of India VI (c 1605-1750))

After completion of the course, students will be able to explain and reconstruct the lineage of the history of India under the Mughal rule.

Paper: SEC-HIS-SE-4014(Oral History and Cultural History)

After completion of the course, the students will be able to explain complex interrelationships of structures or events in the context broadening social and cultural framework of societies through public memory.

5th Semester:

Paper: HIS-HC-5016(History of Modern Europe I (c 1780-1939))

After the completion of this course, the students will be able to evaluate the historical evolution and political developments that occurred in Europe in the period between 1780 to 1939 CE.

Paper: HIS-HC-5026(History of India VII (c 1780-1857))

After the completion of this course, the students will be able to relate the circumstances leading to the consolidation of colonial role over India and their consequences.

Paper: HIS-HE-5016 (History of Assam (upto c 1228))

This paper aims to give the students a general outline of the history of Assam from the earliest times to the advent of the Ahoms in the 13th century.

Paper: HIS-HE-5026 (History of Assam (c 1228-1826))

On completion of this course, students will be able to identify major stages of developments in the political, social and cultural history of Assam during the medieval times.

6th Semester:-

Paper: HIS-HC-6016(History of India VIII (c 1857 -1950))

After the completion of this course, the students will be able to analyze the course of British colonial exploitation, social mobilizations during the period between 1857 to 1950 CE.

Paper: HIS-HC-6026(History of Modern Europe II (c 1780-1939))

After the completion of this course, the students will be able to analyze the historical developments in Europe between 1780 to 1939 CE.

Paper: HIS-HE-6016(History of Assam (c 1826-1947))

After the completion of this course, the students will be able to describe the period of British rule in Assam after its annexation by the Imperialist forces.

Paper: HIS-HE-6026(Assam since Independence)

After the completion of this course, the students will be able to assess the aftermath of partition and other socio-economic developments in post-Independence Assam.

BA GENERAL PROGRAMME OUTCOME IN HISTORY

3rd Semester:

Paper: HIS-HG-3016(History of India (c 1757-1947))

This paper shall deal about the history of India from the Battle of Plassey up to the independence of India in 1947.

4th Semester:

Paper: HIS-HG-401(Social and Economic History of India)

This paper shall provide the details of the social and economic development of Indian history since the earliest times to the relevant times.

5th Semester:

Paper 5.1: History of Europe (1453-1815AD)

This paper deals with the History of Europe from the defeat of the Byzantines under the hands of the Ottoman Turks up to the rise of nationalistic ideals in European politics.

Paper 5.2: History of India (1757-1857 AD)

This paper provides the details of the Indian historical period from the Battle of Plassey up to the Sepoy Mutiny or the Revolt of 1857.

6th Semester:

Paper 6.1: History of India (1858-1947AD)

This paper deals with the history of India from the period of Queen's proclamation up to the independence of India.

Paper 6.2: Modern Assam (1826-1947 AD)

This paper deals with the history of modern Assam starting from the annexation by the British through the treaty of Yandabo up to the independence of India from the colonists.

MA PROGRAMME OUTCOME IN HISTORY

3rd Semester:

Paper: HIS 3016(Imperialism and Nationalism in India (1858-1947))

The paper is about the Indian National Movement.

Paper: HIS3026(History of Assam (1826-1947 c.e)

The paper is about colonial penetration in Assam.

Paper: HIS 3036(Gender History)

The paper is about the basic concept and sources related gender history

Paper: HIS 304C6(Economic History of Modern India (1757-1947))

The paper is about the Economic history of Modern India under the Imperialist system.

4th Semester:

Paper: HIS 4016(Post independence India (1947-2000))

The paper is about the diverse problems and issues of India after her independence.

Paper HIS 402c6 (Peasant's struggle in Modern India)

This paper is about struggles of peasantry during British rule in India.

Paper HIS 403b6 (Environmental History of India)

The paper is about environmental awareness among the students of the country.

Paper: Project

The project paper aims to train the students to undertake research activities of various fields.

BA MAJOR AND GENERAL PROGRAMME OUTCOME IN PHILOSOPHY

3rd Semester:

Paper: PHI-HC-3056 CORE 5 (WESTERN PHILOSOPHY: DESCARTES TO HEGEL)

This paper deals with Western philosophers belonging to the trends of Rationalism and Empiricism.

Paper: PHI-HC-3066 CORE 6 (INDIAN PHILOSOPHY II)

This paper deals with the orthodox schools of Indian Philosophy namely, Samkhya, Yoga, Nyaya, Vaisheshika, Mimamsa and Vedanta.

Paper: PHI-HC-3076 CORE 7(ETHICS)

This paper explores the nature, scope and utility of the study of Ethics. It also focuses on areas like Aristotle's Virtue Ethics, Kantian Deontological Ethics and the Utilitarianism of Bentham and Mill. Furthermore, this paper also concentrates on topics like the Theories of Punishment, Professional and Environmental Ethics. Along with the aforementioned topics it also focuses on Indian Ethical theories like Purusharthas, Buddhist ethics, Jaina ethics etc.

Paper: SEC 1 (REASONING AND LOGIC) This paper deals with different types of logical and reasoning. It also involves reasoning exercises.

3rd Semester:

Paper: PHI-HG-3036/ PHI-RC-3036 GE(ETHICS)

This paper explores the nature, scope and utility of the study of Ethics. It also focuses on areas like Aristotle's Virtue Ethics, Kantian Deontological Ethics and the Utilitarianism of Bentham and Mill. Furthermore, this paper also concentrates on topics like the Theories of Punishment, Professional and Environmental Ethics. Along with the aforementioned topics it also focuses on Indian Ethical theories Like Purusharthas, Buddhist ethics, Jaina ethics etc.

4th Semester:

Paper: PHI-HC-4086/PHI-RE-5016 CORE 8(CONTEMPORARY INDIAN PHILOSOPHY PAPER)

This paper deals with four contemporary Indian Philosophers namely, Aurobindo, Radhakrishnan, Mahatma Gandhi and Vivekananda.

Paper: PHI-HC-4096/PHI-RE-6026 CORE 9 (PHILOSOPHY OF RELIGION PAPER)

This paper deals with the nature and scope of religion and discussions on various issues of Philosophy of Religion like- proofs for the existence of God, Freedom of will, religious language and symbolism etc.

Paper: PHI-HC-4106 CORE 10 (POLITICAL AND SOCIAL PHILOSOPHY PAPER)

This paper focuses on the various political and social issues like political ideologies, forms of government, corruption, gender discrimination, humanism, secularism etc.

Paper: SEC 2 (CRITICAL THINKING)

This paper deals with critical thinking. It also inculcates practical skills which can be applied in writing.

4th Semester:

Paper: PHI-HG-4046/ PHI-RC-4046 GE(LOGIC)

This paper focuses on both the traditional or Aristotelian logic and Modern or Symbolic logic.

5th Semester:

Paper: PHI-HC-5016 (Analytic Philosophy)

By studying this paper, the student acquires the ability to analyze certain basic philosophical concepts to distinguish meaningful statements from meaningless statements and to comprehend the linguistic orientation of contemporary philosophy.

Paper: PHI-HC-5026 (Phenomenology and Existentialism)

By reading this paper one may appreciate certain aspects of the interpretative tradition of contemporary philosophy and also to understand the significance of human existence in contrast to essence.

Paper: PHI-HE-5016 (Philosophy of Upanishads)

The thrust of this paper is on certain basic concepts of the Upanishads. As the Upanishads are regarded to be the foundation head of Indian philosophy the study of this paper enables the learners to understand many basic issues of Indian philosophical traditions.

Paper: PHI-HE-5026 (Philosophy of Gita)

This paper enables the students to understand the synthesis of the three yogas as found in the Gita.

Paper: PHI-HE-5036 (Isa Upanishad with Shankara Bhasya)

The Isa Upanishad, which is the smallest Upanishad, contains many ideas central to the Upanishadic tradition. By understanding these ideas, students can have an appreciation of the basis of Upanishadic philosophy in general.

6th Semester:

Paper: PHI-HC-6016 (Philosophy of Mind)

The study of this paper enables the students to have an understanding of the theories of mind body relation, personal identity etc.

Paper: PHI-HC-6026 (Meta Ethics)

The thrust of this paper is to draw the distinction between normative ethics and meta ethics and to enable the students to understand certain basic meta ethical ideas of Moore, Stenenson, Ayer and Hare.

Paper: PHI-HE-6016 (Western Philosophy – Textual Study)

This paper enables the students to appreciate some of the basic metaphysical and epistemological ideas of Plato, Hegel, Wittgenstein and Sartre

Paper: PHI-HE-6026 (Philosophy of Language)

This paper enables students to appreciate and understand the various philosophical dimensions of language.

Paper: PHI-HE-6036 (Applied Ethics)

Applied Ethics which is a fast-developing branch of ethics focuses on certain issues related to the relation between man and nature, the implications of certain medical and legal practices etc. The students learn to understand certain basic issues which are of great contemporary moral relevance.

BA MAJOR PROGRAMME OUTCOME IN POLITICAL SCIENCE

3rd Semester:

Introduction To Comparative Government and Politics; 3016

This paper tries to understand the comparative politics of the different countries of the world. This paper particularly focuses on the framework of Socialism, Capitalism of the different countries of the world.

Perspective On Public Administration; 3026

This course provides an introduction of the discipline of public administration. It gives us a comprehensive understanding on contemporary administrative development.

Perspective On International Relations and World History; 3036

This paper gives us an idea on international relations and world history of global system. Students are expected to learn about the key milestone in world history to understand from different perspectives.

4th Semester:

Political Process and Institutions in Comparative Perspectives; 4016

In this course, students will be trained in different applications of the study of comparative politics.

Public Policy and Administration in India; 4026

This paper seeks to provide an introduction to the interface between public policy and administration in India, particularly decentralization, budget, social welfare administration.

Global Politics; 4036

This paper tries to understand the students about globalization by addressing its political, economic, social, cultural and technological dimensions.

5th Semester:

Paper: POL-HC-5016(Classical Political Philosophy)

The paper familiarizes students with the ideas underlying traditions in classical political philosophy. It also analyzes the debates and arguments of leading political philosophers of the period.

Paper: POL-HC-5026(Indian Political Thought-I)

The basic focus of study is on the themes, issues in political traditions of pre-colonial India, its relevance in contemporary period and comparative study of different political traditions.

(Elective Discipline Specific DSE Papers)

Paper: POL-HE-5016(Human Rights)

The paper describes the basic concepts, origin, growth, development, approaches and measures for the protection of human rights.

Paper: POL-HE-5046(Select Constitutions -I)

The paper enables the students to understand the importance of constitution, learn about various types of constitutions and forms of government.

6th Semester:

Paper: POL-HC-6016(Modern Political Philosophy)

The paper introduces the ideas underlying traditions in modern political philosophy, debates and arguments of leading political philosophers of the period.

Paper: POL-HC-6026(Indian Political Thought-II)

It enables to understand basic themes and issues in political thought of modern India, comparative study of leading political thinkers and its relevance in contemporary period.

(Elective Discipline Specific DSE Papers)

Paper: POL-HE-6016(Human Rights in India)

It helps in understanding origin, development, emerging issues related to human rights along with the different measures adopted by India for its protection.

Paper: POL-HE-6046(Select Constitutions-II)

The students are able to understand the importance of constitutions, its various types and the forms of government of different parts of the world

BA MAJOR PROGRAMME OUTCOME IN SANSKRIT

3rd Semester:

Paper: SKT-HC-3016(Classical Sanskrit Literature (Drama))

This paper gives the knowledge of Sanskrit Drama

Paper: SKT-HC-3036(Poetics and Literary criticism)

This paper gives an idea of Sanskrit poetics, forms of Kavya Literature, Alamkara etc.

Paper: SKT-SE-3036(Indian Social Institutions and Polity)

This paper gives an idea of structure of society, value of life, origin and development of Indian Polity and thinkers of Indian Polity etc.

Paper: SKT-SE-3014(Acting and Script Writing)

This paper gives the knowledge of Acting and Script Writing.

4th Semester:

Paper: SKT-HE-4016(India Epigraphy, Paleography and Chronology)

This paper gives the knowledge of Epigraphical journey in Sanskrit, Paleography and Chronology.

Paper: SKT-HE-4026(Modern Sanskrit Literature)

This paper gives the idea of Mahakavya, Gadyakavya, Rupaka, Gitikavya etc

Paper: SKT-HE-4036(Sanskrit and World Literature)

This paper gives the knowledge of spread and influence of Sanskrit Literature and Culture through the ages in various parts of the world in medieval and modern times.

Paper: SKT-SE-4014(Sanskrit Metre and Music)

This paper helps to learn Sanskrit Metre for analysis and lyrical techniques and also gives the complete information regarding selected Vedic and Classical Metres.

5th Semester:

Paper: SKT-HC-5016(VEDIC LITERATURE)

This paper gives the knowledge of various Vedic texts, Brahmanas and Upanisads.

Paper: SKT-HC-5026(SANSKRIT GRAMMAR)

This paper gives the idea of general Sanskrit Grammar.

Paper: SKT-HE-5026(THEATRE AND DRAMATURGY)

This paper gives the idea of tradition and history of Indian theatre and dramaturgy.

Paper: SKT-HE-5036(SANSKRIT LINGUISTIC)

This paper gives the knowledge of comparative philology and its relation with Sanskrit language.

6th Semester:

Paper: SKT-HC-6016(ONTOLOGY AND EPISTEMOLOGY)

This paper gives the idea of essential aspects of Indian Philosophy.

Paper: SKT-HC-6026(SANSKRIT COMPOSITION AND COMMUNICATION)

This paper gives the idea of composition and other related information based on Laghusiddhantakaumudi.

Paper: SKT-HE-6016(FUNDAMENTALS OF AYURVEDA)

This paper gives the knowledge of basic principles and concepts of preventative medicine and health maintenance, diet and nutrition.

Paper: SKT-HE-6036(KAMARUPA SCHOOL OF DHARMASASTRA)

This paper gives the knowledge of meaning and scope of Dharma, Dharmasastras in Assam, smriti writers of Kamarupa and Tirtha Kaumudi of Pitambara Siddhantavagisha.

BA GENERAL PROGRAMME OUTCOME IN SANSKRIT

3rd Semester:

Paper: SKT-HG-3016(Basic Principles of Indian Medicine Systems (Ayurveda))

This paper gives the concept of preventive medicine and healthcare, diet and nutrition, uses of commonly used spices and herbs and an outline of Ayurvedic therapeutic procedures in Ayurveda.

4th Semester:

Paper: SKT-HG-4016(Fundamentals of Indian Philosophy)

This paper gives the idea of general introduction of Indian philosophy, schools of Indian Philosophy and problems in Indian Philosophy.

B.Sc MAJOR PROGRAMME OUTCOME IN BOTANY

3rd Semester:

Paper: BOT-HC-3016(Morphology and Anatomy of Angiosperms (THEORY))

Course imparts Knowledge on morphology of angiosperms and developmental biology of plant body.

Knowledge on structural and anatomical organization of tissue system in plants and their classification.

(PRACTICAL) Practical knowledge on inflorescences and fruits of angiosperms, anatomical features of plant body parts

Paper: BOT-HC-3026(Economic Botany (THEORY))

Course imparts knowledge on morphology, uses and economic importance of crop plants. Knowledge on uses of industrially important plants.

(PRACTICAL) Practical knowledge on economically important plant parts and their products

Paper: BOT-HC-3036(Genetics (THEORY))

Course imparts knowledge on Mendelian concepts in genetics; structure, functions and properties of chromosome; chromosomal aberration, Knowledge on gene structures and gene mutations, population genetics.

(PRACTICAL) Practical knowledge on chromosomal mapping and gene interaction studies, Practical visualization of chromosomal anomalies

4th Semester:

Paper: BOT-HC-4016(Molecular Biology (THEORY))

Course imparts detailed knowledge on architecture of nucleic acids, organization of DNA in organisms, models of replication and the factors associated with it. Detailed knowledge on transcriptional and post transcriptional events in a cell, translation of proteins.

(PRACTICAL) Practical acquaintance of isolation and quantification of DNA from plants, Knowledge on photographic study of RNA polymerases and RNA modification machinery

Paper: BOT-HC-4026(Plant Ecology and Phytogeography (THEORY))

Course imparts knowledge on origin, formation and properties of abiotic components of the ecosystem, interactions and adaptation of plants with biotic and abiotic factors. Knowledge on properties of communities in a population and trophical and habitat organization in an ecosystem. (PRACTICAL) Practical knowledge on property analysis of abiotic components of the ecosystem, Practical knowledge on vegetation study and different ecological sites

Paper: BOT-HC-4036(Plant Systematics (THEORY))

Course imparts knowledge on plant identification and classification systems, plant nomenclature. Knowledge on phylogenetic and evolutionary relationships of angiosperms.

(PRACTICAL) Practical knowledge on foliar morphology and taxonomical study of angiosperms.

5th Semester:

Paper: BOT-HC-5016(REPRODUCTIVE BIOLOGY OF ANGIOSPERMS)

It imparts knowledge about the history, reproductive development, anther and pollen biology, ovule, pollination and fertilization, self-incompatibility, embryo, endosperm and seed, polyembryony and apomixis of angiosperms.

Paper: BOT-HC-5026 PLANT PHYSIOLOGY

It imparts knowledge about the plant-water relations, mineral nutrition, nutrient uptake, translocation in the phloem, plant growth regulators, physiology of flowering phytochrome, cryptochromes and phototropins.

DISCIPLINE SPECIFIC ELECTIVE

Paper: BOT-HE-5016 (NATURAL RESOURCE MANAGEMENT)

It imparts knowledge about the natural resources, sustainable utilization of land, water, bioresources, forest and energy resources. It also imparts the contemporary practices in resource management and national and international efforts in resource management and conservation.

Paper: BOT-HE-5026 (HORTICULTURAL PRACTICES AND POST-HARVEST TECHNOLOGY)

It imparts knowledge about the scope and importance, branches of horticulture, ornamental plants, fruits and vegetable crops, horticultural techniques, landscaping and garden design, floriculture, post-harvest technology, disease control and management, horticultural crops - conservation and management along with field visit to gardens, standing crop sites, nurseries, vegetable gardens and horticultural fields at suitable locations.

6th Semester:

Paper: BOT-HC-6016 (PLANT METABOLISM)

It imparts knowledge about the Concept of metabolism, Carbon assimilation, Carbohydrate metabolism, Carbon Oxidation, ATP-Synthesis, Lipid metabolism, Nitrogen metabolism and Mechanisms of signal transduction.

Paper: BOT-HC-6026 (PLANT BIOTECHNOLOGY)

It imparts knowledge about the Plant Tissue Culture, Recombinant DNA technology, Gene Cloning, Methods of gene transfer and Applications of Biotechnology.

DISCIPLINE SPECIFIC ELECTIVE

Paper: BOT-HE-6016: INDUSTRIAL AND ENVIRONMENTAL MICROBIOLOGY

It imparts knowledge about the bioreactors/fermenters and fermentation processes, microbial production of industrial products, microbial enzymes of industrial interest and enzyme immobilization, microbes and quality of environment, microbial flora of water and microbes in agriculture and remediation of contaminated soils.

Paper: BOT-HE-6036 PROJECT WORK/DISSERTATION

For this paper students perform one project each on various topics allotted based on curriculum.

Course Objective: This course starts with the basic principles of metallurgy so as to acquaint the students with the application of the redox chemistry they have learnt in the earlier course on inorganic chemistry. Concepts of protonic and non-protonic acids and bases are introduced for students to appreciate different types of chemical reactions. Periodic behaviour of s and p block elements related to their electronic structure and their reactivity is included to acquaint students with the principles governing their reactivity. This course further intend to apprise students about the variety of compounds of the main group elements including oxides, hydrides, nitrides, interhalogens, noble gases and inorganic polymers. As part of the accompanying lab course, experiments involving iodo- and iodi-metric titrations are included for the students to explore other varieties of redox titration. Preparation of simple inorganic compounds is introduced to give hands-on experience of inorganic synthesis.

Learning Outcome: On successful completion of this course students would be able to apply theoretical principles of redox chemistry in the understanding of metallurgical processes. Students will be able to identify the variety of s and p block compounds and comprehend their preparation, structure, bonding, properties and uses. Experiments in this course will boost their quantitative estimation skills and introduce the students to preparative methods in inorganic chemistry

Paper: CHE-HC-3012: LAB

Through the laboratory experiments carried out the students will learn about the estimation of metals by iodometric method and also preparation of inorganic compounds.

Paper: CHE-HC-3024: ORGANIC CHEMISTRY

Course Objectives: This course is intended to apprise students about different classes of organic compounds, including halogenated hydrocarbons, alcohols, phenols, epoxides, carbonyl compounds and carboxylic and sulfonic acids. Students are expected to learn and differentiate between various organic functional groups; explain, analyze and design transformations between different functional groups.

Learning Outcome: Students will be able to describe and classify organic compounds in terms of their functional groups and reactivity.

Paper: CHE-HC-3022: LAB

Through the laboratory experiments carried out the students will learn about the test of functional groups of organic compounds and also preparation of organic compounds using both conventional method and green approach.

Paper: CHE-HC-3034: PHYSICAL CHEMISTRY-III

Course Objective: The aim of this course is to teach students four important topics of physical chemistry- phase equilibria, chemical kinetics, surface chemistry and catalysis. Phase equilibria and chemical kinetics will be discussed in detail but surface chemistry and catalysis will be introduced to the students.

Learning Outcome: The students are expected to learn phase rule and its application in some specific systems. They will also learn rate laws of chemical transformation, experimental methods of rate law determination, steady state approximation etc. in chemical kinetics unit. After attending this course, the students will be able to understand different types of surface adsorption processes and basics of catalysis including enzyme catalysis, acid base catalysis and particle size effect on catalysis.

BSC MAJOR PROGRAMME OUTCOME IN CHEMISTRY**3rd Semester:****Paper: CHE-HC-3016(INORGANIC CHEMISTRY-II)**

Course Objective: This course starts with the basic principles of metallurgy so as to acquaint the students with the application of the redox chemistry they have learnt in the earlier course on inorganic chemistry. Concepts of protonic and non-protonic acids and bases are introduced for students to appreciate different types of chemical reactions. Periodic behavior of s and p block elements related to their electronic structure and their reactivity is included to acquaint students with the principles governing their reactivity. This course further intends to apprise students about the variety of compounds of the main group elements including oxides, hydrides, nitrides, interhalogens, noble gases and inorganic polymers. As part of the accompanying lab course, experiments involving iodo- and iodi-metric titrations are included for the students to explore other varieties of redox titration. Preparation of simple inorganic compounds is introduced to give hands-on experience of inorganic synthesis.

Learning Outcome: On successful completion of this course students would be able to apply theoretical principles of redox chemistry in the understanding of metallurgical processes. 17 Students will be able to identify the variety of s and p block compounds and comprehend their preparation, structure, bonding, properties and uses. Experiments in this course will boost their quantitative estimation skills and introduce the students to preparative methods in inorganic chemistry.

Paper: CHE-HC-3012: LAB

Through the laboratory experiments carried out the students will learn about the estimation of metals by iodometric method and also preparation of inorganic compounds.

Paper: CHE-HC-3026(ORGANIC CHEMISTRY-II)

Course Objectives: This course is intended to apprise students about different classes of organic compounds, including halogenated hydrocarbons, alcohols, phenols, epoxides, carbonyl compounds and carboxylic and sulfonic acids. Students are expected to learn and differentiate between various organic functional groups; explain, analyze and design transformations between different functional groups.

Learning Outcome: Students will be able to describe and classify organic compounds in terms of their functional groups and reactivity.

Paper: CHE-HC-3022: LAB

Through the laboratory experiments carried out the students will learn about the test of functional groups of organic compounds and also preparation of organic compounds using both conventional method and green approach.

Paper: CHE-HC-3036(PHYSICAL CHEMISTRY-III)

Course Objective: The aim of this course is to teach students four important topics of physical chemistry- phase equilibria, chemical kinetics, surface chemistry and catalysis. Phase equilibria and chemical kinetics will be discussed in detail but surface chemistry and catalysis will be introduced to the students.

Learning Outcome: The students are expected to learn phase rule and its application in some specific systems. They will also learn rate laws of chemical transformation, experimental methods of rate law determination, steady state approximation etc. in chemical kinetics unit. After attending this course the students will be able to understand different types of surface adsorption processes and basics of catalysis including enzyme catalysis, acid base catalysis and particle size effect on catalysis.

Paper: CHE-HC-3032: LAB

Through the laboratory experiments carried out the students will learn about the determination of critical solution temperature and also construction of phase diagram.

Paper: CHE-SE-3034 (BASIC ANALYTICAL CHEMISTRY)

Course Objective: To familiarize students with different micro and semimicro analytical techniques and help develop the ability to use modern instrumental methods for chemical analysis of food, soil, air and water.

Learning Outcome: Upon completion of this course, students shall be able to explain the basic principles of chemical analysis, design/implement microscale and semimicro experiments, record, interpret and analyze data following scientific methodology.

4th Semester:

Paper: CHE-HC-4016(INORGANIC CHEMISTRY-III)

Course Objective: This course introduces students to coordination chemistry. Various aspects like nomenclature, structure, bonding, variety and reactivity of the coordination compounds are included for the students to appreciate. Bioinorganic chemistry is included in this course to acquaint students on the useful and harmful aspects of metals in biological systems. Through the accompanying lab course, experiments related to gravimetric analysis, synthesis of coordination compounds and separation of metal ions using chromatography is included. This will broaden the experimental skills of the students where students will learn about various aspects of experiment design depending upon the requirements like synthesis, estimation or separation.

Learning Outcome: On successful completion, students will be able name coordination compounds according to IUPAC, explain bonding in this class of compounds, understand their various properties in terms of CFSE and predict reactivity. Students will be able to appreciate the general trends in the properties of transition elements in the periodic table and identify differences among the rows. Through the experiments students not only will be able to prepare, estimate or separate metal complexes/compounds but also will be able to design experiments independently which they should be able to apply if and when required.

Paper: CHE-HC-4012: LAB

Through the laboratory experiments carried out the students will learn about the estimation of metals by gravimetric method and also preparation of inorganic compounds.

Paper: CHE-HC-4026(ORGANIC CHEMISTRY-III)

Course Objectives: The course introduces students to different classes of N-based compounds, including alkaloids and terpenoids and their potential application. Students are expected to learn about different classes of N-based compounds; their structures, synthesis and reactivity.

Learning Outcome: Students shall demonstrate the ability to identify and classify different types of N-based derivatives, alkaloids and heterocyclic compounds/explain their structure mechanism and reactivity/critically examine their synthesis and reactions mechanism.

Paper: CHE-HC-4022: LAB

Through the laboratory experiments carried out the students will learn about the Qualitative analysis of unknown organic compounds.

Paper: CHE-HC-4036(PHYSICAL CHEMISTRY-IV)

Course Objective: The aim of this course is to introduce students with primarily two areas of physical chemistry- electrochemistry and electrical and magnetic properties of atoms and molecules. It contains three units- conductance, electrochemistry and electrical & magnetic properties of atoms and molecules.

Learning Outcome: In this course the students will learn theories of conductance and electrochemistry. Students will also understand some very important topics such as solubility and solubility products, ionic products of water, conductometric titrations etc. The students are also expected to understand the various parts of electrochemical cells along with Faraday's Laws of electrolysis. The students will also gain basic theoretical idea of electrical & magnetic properties of atoms and molecules.

Learning Outcome: On successful completion, students will be able name coordination compounds according to IUPAC, explain bonding in this class of compounds, understand their various properties in terms of CFSE and predict reactivity. Students will be able to appreciate the general trends in the properties of transition elements in the periodic table and identify differences among the rows. Through the experiments students not only will be able to prepare, estimate or separate metal complexes/compounds but also will be able to design experiments independently which they should be able to apply if and when required.

Paper: CHE-HC-4032: LAB

Through the laboratory experiments carried out the students will learn about conductometric and potentiometric titrations.

Paper: CHE-SE-4014 (ANALYTICAL CLINICAL BIOCHEMISTRY)

Course objective: This course is intended to apprise students with various clinically relevant biomolecules, their structures and physiological roles. Students are also expected to learn the basics of analysis of pathological samples (blood and urine).

Learning outcome: Students will be able to identify various molecules relevant to a particular pathological condition and their estimation protocols.

5th Semester:

Paper: CHE-HC-5016(ORGANIC CHEMISTRY-IV)

Course Objectives: This course introduces students to nucleic acids, amino acids and pharmaceutical compounds. Students will be familiarized with the importance of nucleic acids, amino acids and develop basic understanding of enzymes, bioenergetics and pharmaceutical compounds.

Learning Outcome: Students will be able to explain/describe the important features of nucleic acids, amino acids and enzymes and develop their ability to examine their properties and applications.

Paper: CHE-HC-5026(PHYSICAL CHEMISTRY-V)

Course Objective: The aim of this course is to introduce the students with three important areas- quantum chemistry, molecular spectroscopy and photochemistry. In quantum chemistry unit the students will be taught the postulates of quantum mechanics and the application of quantum mechanical ideas in some simple systems such as particle in a box, rigid rotor, simple harmonic oscillator etc. In spectroscopy unit, rotational, vibrational, Raman, electronic, spin resonance, and electronic spectroscopy will be introduced.

Learning Outcome: After completion of this course the students are expected to understand the application of quantum mechanics in some simple chemical systems such as hydrogen atom or hydrogen like ions. The students will also learn chemical bonding in some simple molecular systems. They will be able to understand the basics of various kinds of spectroscopic techniques and photochemistry.

Paper: CHE-HC-5022: LAB

Course Objectives: This course gives a practical knowledge on determination of absorbance of various solutions using UV-Visible spectrometer and colorimeter and analysis of the given vibration-rotation spectrum of HCl(g).

Learning Outcome: Students will get a practical knowledge on determination of concentration of a solution from the absorbance values.

Paper: CHE-HE-5026: ANALYTICAL METHODS IN CHEMISTRY

Course Objective: This is an elective course designed to complement the needs of students who wish to learn more about the qualitative/quantitative characterization and separation techniques. The content of this course aims to cover some of the widely used instrumental techniques for characterization of samples. Experiments included aim at giving students hands on experience using different instrumental techniques and chemical analysis.

Learning outcome: On successful completion students will be have theoretical understanding about choice of various analytical techniques used for qualitative and quantitative characterization of samples. At the same time through the experiments students will gain hands on experience of the discussed techniques. This will enable students to take judicious decisions while analyzing different samples.

Paper: CHE-HE-5022: LAB

Course Objectives: This course gives a practical knowledge on separation of constituents of a mixture using paper chromatography and TLC and determination of Na, Li and Ca using flame photometry.

Learning Outcome: Students will get a practical knowledge on how to separate the constituents of a mixture using paper and thin layer chromatography.

Paper: CHE-HC-5056: POLYMER CHEMISTRY

Course objective: This is an introductory level course in polymer chemistry. The aim of the course is to introduce the theory and applications of polymer chemistry to the students. Some industrially important polymers and conducting polymers, a promising class of polymeric materials for next generation devices will also be introduced in this course.

Learning outcome: After completion of this course the students will learn the definition and classifications of polymers, kinetics of polymerization, molecular weight of polymers, glass transition temperature, and polymer solutions etc. They also learn the brief introduction of preparation, structure and properties of some industrially important and technologically promising polymers.

Paper: CHE-HE-5052: LAB

Course Objectives: This course gives a practical knowledge on preparation methods of various polymers.

Learning Outcome: After successful completion of the course students will get a practical knowledge on various polymer preparation methods.

6th Semester:**Paper: CHE-HC-6016(INORGANIC CHEMISTRY-IV)**

Course Outcome: The unit on reaction mechanism is included for the students to get acquainted with the kinetic and thermodynamic factors governing the reaction path and stability of inorganic compounds. Organometallic compounds are introduced so as to apprise students about the importance of metal carbon bond to form complexes and their application as catalysts. Students are expected to learn factors leading to stability of Organometallic compounds, their synthesis, reactivity and uses. Qualitative inorganic analysis is included to give students an idea and hands on experience of application of inorganic chemistry. Students should learn how differential reactivity under different conditions of pH can be used to identify variety of ions in a complex mixture. Experiments related to synthesis and characterization of coordination compounds are included to supplement their theoretical knowledge.

Learning Outcome: By studying this course, the students will be expected to learn about how ligand substitution and redox reactions take place in coordination complexes. Students will also learn about organometallic compounds, comprehend their bonding, stability, reactivity and uses. They will be familiar with the variety of catalysts based on transition metals and their application in industry. On

successful completion, students in general will be able to appreciate the use of concepts like solubility product, common ion effect, pH etc. in analysis of ions and how a clever design of reactions, it is possible to identify the components in a mixture. With the experiments related to coordination compound synthesis, calculation of 10Dq, controlling factors etc. will make the students appreciate the concepts of theory in experiments.

Paper: CHE-HC-6026(ORGANIC CHEMISTRY-V)

Course Objectives: This is a basic course in organic spectroscopy and provides introduction to carbohydrate chemistry, dyes and polymers. Students are expected to learn about the different spectroscopic techniques and their applications in organic chemistry. Students shall be apprised with carbohydrate chemistry, dyes and polymers and their structure, reactivity and chemical properties.

Learning Outcome: Students will be able to explain/describe basic principles of different spectroscopic techniques and their importance in chemical/organic analysis. Students shall be able to classify/identify/critically examine carbohydrates, polymers and dye materials.

Paper: CHE-HC-6022: LAB

Course Objectives: This course gives a practical knowledge on qualitative analysis of an unknown organic compound.

Learning Outcome: After successful completion of the course students will get a practical knowledge on analysis technique of organic samples.

Paper: CHE-HE-6016: GREEN CHEMISTRY

Course Objective: The learners will be taught about green chemistry particularly to differentiate as to how the principles of green chemistry may be applied to organic synthesis.

Learning Outcome: Apart from introducing learners to the principles of green chemistry, this course will make them conversant with applications of green chemistry to organic synthesis. Students will be prepared for taking up entry level jobs in the chemical industry. They also will have the option of studying further in the area.

Paper: CHE-HE-6012: LAB

Course Objectives: This course gives a practical knowledge on green techniques of organic synthesis.

Learning Outcome: After successful completion of the course students will get a practical knowledge on green techniques for organic synthesis.

Paper: CHE-HE-6056: DISSERTATION

Learning Outcome: After successful completion of the course students will get a fair knowledge on how to start a research work.

BSC MAJOR PROGRAMME OUTCOME IN MATHEMATICS

3rd Semester:

Paper: MAT-HC-3016(THEORY OF REAL FUNCTION)

It imparts the knowledge of limit of functions and geometrical properties of continuous functions. It has many applications in different branches of science.

Paper: MAT- HC 3026(GROUP THEORY)

It imparts the knowledge of mathematical objects that are groups and classify them as abelian, cyclic etc. Also give the fundamental concept of symmetrical figures. It has immense applications in physics and chemistry also.

Paper: MAT- HC-3036(ANALYTICAL GEOMETRY)

This course will enable the students to have a rigorous understanding of the concept of three-dimensional co-ordinate system. It has many applications in Physics and engineering also.

4th Semester:

Paper: MAT- HC-4016(MULTIVARIATE CALCULUS)

This course will facilitate to become aware of applications of multivariable calculus tools in Physics, Economics, Optimization and understanding the architecture of curves and surfaces in plane and space etc.

Paper: MAT- HC-4026(NUMERICAL METHOD)

This course will enable the students to learn some numerical methods to find the zeroes of nonlinear functions of a single variables and solution of a system of linear equations up to a certain given level of precision.

Paper: MAT- HC-4036(RING THEORY)

This course will enable the students to appreciate the significance of unique factorization in rings and integral domain.

5th Semester:

Paper: MAT-HC-5016(COMPLEX ANALYSIS)

The outcome of the course will enable the students to learn the significance of differentiability of complex function leading to the understanding of Cauchy Reimann Equations. Also, learn some elementary functions and evaluate the contour integrals.

Paper: MAT-HC-5026(LINEAR ALGEBRA)

The outcome of the course will enable the students to learn about the concept of linear dependence and independence of vectors, basic concept of linear transformation. The matrix representation of a linear transformation, also, compute the inner product.

Paper: MAT-HE-5016(NUMBER THEORY)

The outcome of the course will enable the students to learn about number theoretic functions and modular arithmetic and also the system of linear congruence equation.

Paper: MAT-HE-5026(MECHANICS)

The outcome of the course will enable the students to learn about the concept in statics such as moment couples, equilibrium in both two and three dimensions and understand the theory behind friction and center of gravity.

Paper: MAT-HE-5036(PROBABILITY AND STATISTICS)

The outcome of the course will enable the students to learn about probability density, Various univariate distribution such as Bernoulli, binomial, poisson's, etc. also, learn about distributions to study the joint behavior of two random variables.

Paper: MAT-HE-5046(LINEAR PROGRAMMING)

The outcome of the course will enable the students to learn about the graphical solution of LPP with two variable and understand to apply to solve different problems.

Paper: MAT-HE-5056(SPHERICAL TRIGONOMETRY AND ASTRONOMY)

The outcome of the course will enable the students to learn about the properties of spherical and polar triangle, fundamental formula of spherical triangles also, know the kepler's law of planetary motion, celestial sphere and also the rate of change of zenith distance and azimuth.

Paper: MAT-HE-5066(PROGRAMMING IN- C)

The outcome of the course will enable the students to learn about structured data types in C and applications in factorization of an integer and understanding to apply the programming concept of C to solve different problems.

6th Semester:

Paper: MAT-HC-6016(REIMANN INTEGRATION AND METRIC SPACE)

The outcome of the course will enable the students to learn about some of the classes and properties of Reimann Integrable functions and the application of the fundamental's theorem of applications and

know about improper integrals. And know about the two important topological properties viz. connectedness and compactness of metric space.

Paper: MAT-HC-6026(PARTIAL DIFFERENTIAL EQUATION)

The outcome of the course will enable the students to learn about method of characteristic and separation of variables to solve first order PDE and second order PDE and apply the method of separation of variables for solving some special second order PDE.

Paper: MAT-HE-6016(BOOLEAN ALGEBRA AND AUTOMATA THEORY)

The outcome of the course will enable the students to learn about the ideas of Boolean algebra, switching circuits and its application also, understand the theory of automata and its application.

Paper: MAT-HE-6026(BIO-MATHEMATICS)

The outcome of the course will enable the students to learn about the development, analysis and interpretation of bio-mathematical models. Students also would be able to develop problem solving skills useful in future study.

Paper: MAT-HE-6036(MATHEMATICAL MODELING)

The outcome of the course will enable the students to learn about power series solutions of a differential equation and Legendre's and Bessel's equation. Also, learn about the use of various models such as Monte-Carlo Simulation models, Queing models and LPP models

Paper: MAT-HE-6046(HYDRO MECHANICS)

The outcome of the course will enable the students to learn about pressure equation, rotating fluid pressure on plane surface, equation of continuity, also acceleration of a fluid at a point.

Paper: MAT-HE-6056(RIGID DYNAMICS)

The outcome of the course will enable the students to learn about motion of a body in two-dimension, moment and product of inertia.

Paper: MAT-HE-6066: GROUP THEORY (II)

The outcome of the course will enable the students to learn about automorphisms for constructing new groups, external direct product applies to data security at electric circuits also understand various theorems and its applications.

Paper: MAT-HE-6076(MATHEMATICAL FINANCE)

The outcome of the course will enable the students to learn about the basics of financial markets and derivatives including options and futures also understand the concept of trading strategies and valuation of currency swaps.

B.Sc MAJOR PROGRAMME OUTCOME IN PHYSICS

3rd Semester:

Paper: PHY-HC-3016(Mathematical Physics II)

Students will be able to solve differential equation using power series solution method, solve differential equation using separation of variables method, special integrals, different properties of matrix, Fourier series.

Paper: PHY-HC-3026(Thermal Physics)

Students will have the knowledge and skills to identify and describe the statistical nature of concepts and laws in thermodynamics.

Paper: PHY-HC-3036(Digital Systems & Applications)

Student will be able to understand the working principle of different digital devices

Paper: PHY-SE-3074(Practical Applied Optics)

Develop the experimental knowledge. Experimental knowledge of Modern Optics.

4th Semester:

Paper: PHY-HC-4016(Mathematical Physics III)

Students will be able to solve complex integrals using residue theorem, apply Fourier and Laplace transforms in solving differential equations, understand properties of Tensor like Transformation of coordinates, contravariant and co-variant tensors, indices rules for combining tensors.

Paper: PHY-HC-4026(Elements of Modern Physics)

Students will be able to understand modern development in Physics,

Paper: PHY-HC-4036(Analog Systems & Applications)

Students will be able to understand about the physics of semiconductor. Practical: develop the experimental knowledge

Paper: PHY-SE-4014(Basic Instrumentation Skills)

To get exposure with various aspects of instruments and their usage through hands-on mode.

5th Semester:**Paper: PHY-HC-5016(Quantum Mechanics & Applications)**

On successful completion of the course students will be able to understand the principles in quantum mechanics, such as the Schrödinger equation, the wave function, the uncertainty principle, stationary and non-stationary states, time evolution of solutions, as well as the relation between quantum mechanics and linear algebra. Students will be able to solve the Schrödinger equation for hydrogen atom. Students will have the concepts of angular momentum and spin, as well as the rules for quantization and addition of these, spin-orbit coupling and Zeeman Effect.

Paper: PHY-HC-5026(Solid State Physics)

On successful completion of the course students should be able to explain the main features of crystal lattices and phonons, understand the elementary lattice dynamics and its influence on the properties of materials, describe the main features of the physics of electrons in solids; explain the dielectric ferroelectric and magnetic properties of solids and understand the basic concept in superconductivity.

Paper: PHY-HE-5046(Physics of Devices and Instruments)

Upon completion of this course, students will be able to gain knowledge on advanced electronics devices such as UJT, JFET, MOSFET, CMOS etc., detailed process of IC fabrication, Digital Data serial and parallel Communication Standards along with the understanding of communication systems.

Paper: PHY-HE-5056(Nuclear and Particle Physics)

Upon completion of this course, students will have the understanding of the sub atomic particles and their properties. They will gain knowledge about the different nuclear techniques and their applications in different branches of Physics and societal application. The course will develop problem-based skills and the acquire knowledge can be applied in the areas of nuclear, medical, archeology, geology and other interdisciplinary fields of Physics and Chemistry.

Paper: PHY-HC-6016(Electromagnetic Theory)

On successful completion of the course students will acquire the concepts of Maxwell's equations, propagation of electromagnetic (EM) waves in different homogeneous-isotropic as well as anisotropic unbounded and bounded media, production and detection of different types of polarized EM waves, general information as waveguides and fibre optics.

6th Semester:**Paper: PHY-HC-6026(Statistical Mechanics)**

On successful completion of the course's students will be learn the techniques of Statistical Mechanics to apply in various fields including Astrophysics, semiconductors, Plasma Physics, Bio-Physics, Chemistry and in many other directions.

Paper: PHY-HE-6016(Communication Electronics)

Upon completion of this course, students will have the concepts of electronics in communication, details of communication techniques based on Analog Modulation, Analog and digital Pulse Modulation including PAM, PWM, PPM, ASK, PSK, FSK, overview of communication and Navigation systems such as GPS and mobile telephony system.

Paper: PHY-HE-6046(Astronomy and Astrophysics)

Upon completion of this course, students will be able to understanding the origin and evolution of the Universe. The course will give a comprehensive introduction on the measurement of basic astronomical parameters such as astronomical scales, luminosity and astronomical quantities. It will give an overview on key developments in observational astrophysics. Students will have the idea of the instruments implemented for astronomical observation, the formation of planetary system and its evolution with time, the physical properties of Sun and the components of

the solar system; and stellar and interstellar components of our Milky Way galaxy. Students will have the understanding of the origin and evolution of galaxies, presence of dark matter and large scale structures of the Universe.

B.Sc MAJOR PROGRAMME OUTCOME IN STATISTICS

3rd Semester:

Paper: STAT-C 301(Sampling Distributions)

It imparts knowledge of convergence in probability and distributions, weak and strong laws of large numbers, central limit theorems, order statistics. Also, knowledge of sampling and exact sampling distribution of statistics, hypothesis, critical region, Type I and Type II error, large sample tests and F and Chi-square distributions.

Paper: STAT-C 302(Survey Sampling and Indian Official Statistics)

It imparts knowledge of drawing sample using different sampling techniques. It helps in research of different disciplines. Also impart knowledge of present official statistical system in India.

Paper: STAT-C 303(Mathematical Analysis)

It imparts knowledge about how to determine the continuity, differentiability, and integrability of functions defined on subsets of the real line and applies the fundamental Theorem of calculus to problems in the context of real analysis. Also, it imparts knowledge of finite difference and numerical integration to estimate any intermediate value of a dataset by means of different interpolation techniques.

Paper 304(Practical Work)

It imparts practical knowledge of drawing sample using different sampling techniques.

4th Semester:

Paper: STAT-C 401(Statistical Inference)

It imparts knowledge of computation of good estimate of concerned statistic by using different methods of estimation and knowledge of hypothesis testing and computation of power of the test and drawing of power curve of the concerned test. Also, it imparts knowledge of sequential Analysis and computation of OC and ASN based on standard probability distributions.

Paper: STAT-C 402(Linear Model)

It imparts knowledge of relation between variables by modeling and estimation of parameters from two variable linear regression models and about model checking when prediction from fitted model done. Also, it imparts knowledge of Analysis of variance technique.

Paper: STAT-C 403(Statistical Quality Control)

It imparts knowledge of statistical process of control in industry and control charts for variable and attribute. Also, it imparts knowledge of principle of acceptance sampling plan.

Paper 404(Practical Work)

It imparts practical knowledge of computation of good estimator, likelihood ratio test for simple null hypothesis against simple alternative hypothesis, SPRT procedure, ASN curve and function, OC curve and function, model fitting and estimation of parameters, Analysis of variance of one way and two-way classified data. Also, it imparts knowledge of construction of statistical control charts.

5th Semester:

Paper: STA-HC-5016(Stochastic Processes and Queuing Theory)

It imparts knowledge of stochastic processes, Markov Chain, Poisson process and Queuing system. Also, it imparts knowledge of practical problems.

Paper: STA-HC-5026(Statistical Computing Using C/C++ Programming)

It imparts knowledge of basic structure of C programming and C++, Basic data types, overflow and underflow of data. Also, it imparts knowledge of Decision making and Arrays and practical problems.

Paper: STA-HE-5016(Operations Research)

It imparts knowledge of model building and phases of O.R., Linear Programming Problem and simplex technique. Also, it imparts knowledge of Transportation Problem, Game Theory and Inventory Management and their practical applications.

Paper: STA-HE-5026(Time Series Analysis)

It imparts practical knowledge of Time series data, component of time series, estimation of trend by various methods and forecasting and smoothing to Time Series. Also, it impacts knowledge of practical problems.

6th Semester:**Paper: STA-HC-6016(Design of Experiments)**

It imparts knowledge of Basic designs like CRD, RBD, LSD, factorial experiments and their real-life applications in different fields of study. The practical helps to apply the analysis in different situations.

Paper: STA-HC-6026(Multivariate Analysis and Nonparametric Methods)

It imparts knowledge of Bivariate Normal and Multivariate Normal distributions, principal component analysis and their practical applications. It also impacts knowledge of various Non- parametric Tests and their practical applications.

Paper: STA-HE-6016(Econometrics)

It imparts knowledge of Various Economic models of two or more variables, estimation of parameters, least square estimation and practical problems.

Paper: STA-HE-6046(Project Work)

The aim of the course is to initiate students to write and present a statistical report, under the supervision of a faculty on some area of human interest. It helps to acquire knowledge of data collection, preparation of database, analysis using software like SPSS, EXCEL, R and preparation of final report on particular topic.

B.Sc MAJOR PROGRAMME OUTCOME IN ZOOLOGY**3rd Semester:****Paper: ZOO-HC-3016 CORE COURSE V (DIVERSITY OF CHORDATA)**

It gives basic and fundamental knowledge of chordate animals of the living world and include Practical's to study live and museum specimens.

Paper: ZOO-HC-3026 CORE COURSE VI (ANIMAL PHYSIOLOGY: CONTROLLING AND COORDINATING SYSTEMS)

Helps to understand the underlying mechanism of functioning of different organ system of animals

Paper: ZOO-HC-3036 CORE COURSE VII (FUNDAMENTALS OF BIOCHEMISTRY)

Deals with the biochemistry of living cells and its different constituents.

4th Semester:**Paper: ZOO-HC-4016 CORE COURSEVIII (COMPARATIVE ANATOMY OF VERTEBRATES)**

Helps in understanding of the structure and organization of the body of vertebrate animals including man.

Paper: ZOO- HC-4026 CORE COURSE IX (ANIMAL PHYSIOLOGY: LIFE SUSTAINING SYSTEMS)

It gives fundamental knowledge about how the important organ systems of higher animal body function and sustain.

Paper: ZOO-HC-4026 CORE COURSE X (BIOCHEMISTRY OF METABOLIC PROCESSES)

It gives an insight on the biochemical reactions, their components and metabolism of the body.

5th Semester:**Paper: ZOO-HC-5016: CORE COURSE XI (MOLECULAR BIOLOGY)**

It gives an insight on the biochemical reactions, their components and metabolism of the body.

Paper: ZOO-HC-5026 CORE COURSE XII (PRINCIPLES OF GENETICS)

Helps in understanding of the principles of genetics and inheritance.

6th Semester:

Paper: ZOO-HC-6016 CORE COURSE XIII (DEVELOPMENTAL BIOLOGY)

Helps in understanding of the Embryonic development in animals.

Paper: ZOO-HC-6026 CORE COURSE XIV (EVOLUTIONARY BIOLOGY)

Helps in understanding of the History, evidences and other aspects of origin of life and evolution.

DISCIPLINE SPECIFIC ELECTIVE COURSE

Paper: ZOO-HE-5016 (COMPUTATIONAL BIOLOGY & BIOSTATISTICS)

The course gives basic idea of bioinformatics, biological databases, and biostatistics.

Paper: ZOO-HE-5036 (ENDOCRINOLOGY)

Helps in understanding of the Endocrinology, hormones and their functioning

Paper: ZOO-HE-6026 (FISH AND FISHERIES)

Helps in understanding of the principles of genetics and inheritance.

Paper: ZOO-HE-6056 (DISSERTATION)

Dissertation on Zoology Specific subject

PROGRAMME OUTCOME IN COMMERCE

3rd Semester:

Paper: COM-HC-3016 (Computer Applications in Business)

It helps in understanding various methods in which IT can be used to support business and strategies.

Paper: COM-HC-3026 (Income-tax Law and Practice)

It explains how the tax system works and gives clarity on how to prevent issues with taxes in future.

Paper: COM-HC-3036 (Management Principles and Applications)

It improves understanding on how to manage an organization and helps in evolution of efficient managers.

Paper: COM-GE-3046(A) (Business Statistics)

It gives knowledge of analyzing past performance, predicting future business practices and lead organizations effectively.

Paper: COM-GE-3046(B) (Operation Research in Business)

It develops understanding of problem solving and use of linear programming for taking decisions of the business.

Paper: COM-SEC-HC-3054(A) (Entrepreneurship)

It teaches students crucial life skills like planning, focus, teamwork, persistence and goal setting.

Paper: COM-SEC-HC-3054(B) (New Venture Planning)

It imparts knowledge of identifying new business opportunities and researching & developing new business concepts and strategies.

4th Semester:

Paper: COM-HC-4016 (Cost Accounting)

It imparts knowledge of cost control and cost reduction for optimizing cost efficiency.

Paper: COM-HC-4026 (Business Mathematics)

It increases the maths knowledge and skills in solving business and finance problems.

Paper: COM-HC-4036 (Human Resource Management)

It imparts knowledge of structuring team for building organization culture.

Paper: COM-GE-4046(A) (Indian Economy)

It helps the students in identifying the major economic activities of India and their importance in growth of our country.

Paper: COM-GE-4046(B) (Micro Finance)

It explains the importance of micro finance as a powerful instrument against poverty and achievement of financial sustainability.

Paper: COM-SEC-HC-4054(A) (E-Commerce)

It helps in understanding the concepts of E-commerce and E-business and also understanding the infrastructure and trends of them.

Paper: COM-SEC-HC-4054(B) (E-Filling of Returns)

It intends to equip the students with understanding of knowledge of e-filling of tax returns.

5th Semester:

Paper: COM-HC-5016 (Principles of Marketing)

This paper focuses on alignment of different marketing strategies with corporate strategies and deals with the social and ethical issues of marketing.

Paper: COM-HC-5026 (Fundamentals of Financial Management)

This paper teaches the ability to understand and manage the different finance functions and also to plan, organize, control and direct the different activities related to finance.

Paper: COM-DSE-HC-5036(A) (Management Accounting)

This paper imparts knowledge on different management accounting tools and include the planning and forecasting aspect of management.

Paper: COM-DSE-HC-5036(D) (Banking)

This paper teaches different aspects of banking functions and helps in acquiring knowledge of Indian Banking System.

Paper: COM-DSE-HC-5036(F) (Indian Financial System)

This paper provides a depth understanding of different avenues of financial system like capital market, banking, insurance, mutual funds etc.

6th Semester

Paper: COM-HC-6016 (Auditing and Corporate Governance)

This paper teaches the introductory knowledge of auditing and its application and also focuses on different areas of corporate governance like-business ethics, moral values, CSR etc.

Paper: COM-HC-6026 (Indirect Tax Laws)

This paper imparts the knowledge of different types of income and their taxability, their expenses and their deductibility and also their practical implication.

Paper: COM-DSE-HC-6036(A) (Fundamentals of Investment)

This paper focuses on the understanding of basic investment analysis techniques and application of investment decisions effectively.

Paper: COM-DSE-HC-6036(B) (Consumer Affairs and Customer Care)

This paper imparts the knowledge of traits and trends of consumer behaviors and application of those in marketing of products and services.

Paper: COM-DSE-HC-6036(D) (International Business)

This paper teaches about the international business environment, strategies and management and also Global perspective of business concepts.

PROGRAMME OUTCOME IN COMPUTER SCIENCE

3rd Semester:

Paper: BCA-HC-3016(Software Engineering)

It imparts the knowledge of software engineering techniques.

Paper: BCA-HC-3026(Data Structure and Algorithms)

Develop the understanding of data structure and associated algorithm in C language.

Paper: BCA-HC-3036(Database Management System)

It imparts the knowledge of managing data using database software.

Paper: BCA-SE-3014(Web Technology)

It imparts the knowledge of web designing techniques.

Paper: BCA-HG-3016(Introduction to Indian History)

It imparts the fundamental knowledge of Indian History.

4th Semester:

Paper: BCA-HC-4016(Computer Organization and Architecture)

It develops the understanding the knowledge of computer organization and architecture.

Paper: BCA-HC-4026(Mathematics-II)

It develops mathematical topics like set, relation, sequence and series, graphs, mathematical logic.

Paper: BCA-HC-4036(Object Oriented Programming in C++)

Develop the understanding of object-oriented programming and C++ programming.

Paper: BCA-SE-4024(Mobile Applications)

It imparts the understanding of mobile technology.

Paper: BCA-SE-4034(Advanced Web Technology)

It imparts the advance knowledge of web designing techniques.

Paper: BCA-HG-4026(Information Security and Cyber Laws)

Develop the knowledge of Information Security and cyber law associated with IT security.

5th Semester:

Paper: BCA-HC-5016(Java Programming)

Course Outcome: On successful completion of the course students will be able to understand the concept of a new programming language java and its applications in developing various software modules. Students will be able to solve different algorithms using this language. Students will have the concepts of java language and the use of its library functions.

Paper: BCA-HC-5026(Operating System)

Course Outcome: On successful completion of the course students will be able to understand the concept of Operating System and all of its functions in the computer system. Students will be able to know how operating system works, how it executes various processes, how it manages compute memory and how it schedules different concurrent processes. One of the most important aspects of a computer system is security and students will learn how operating system take measures to secure the system.

DSE

Paper: BCA-SE-5016(Project Work)

Course Outcome: The outcome of the project paper is to make students expert in real world software developing environment. The objective of the project is to train the student to independently search, identify and study real-life important topics in CS/IT; to develop skills among students in a particular field of CS/IT; and to expose students to the world of technology, innovation, and research. The problem should be such that the students get a chance to explore one or two technologies in depth and grab good command over those technologies after successful completion of the project.

Paper: BCA-HC-5046(Programming in Python)

Course Outcome: On successful completion of the course students will be able to understand the concept of a new programming language Python and its applications in developing various software modules. Students will be able to solve different algorithms using this language. Students will have the concepts of Python language and the use of its library functions. After completion of this paper students will be able to solve complex problems using Python.

6th Semester:

Paper: BCA-HC-6016(System Administration using Linux)

Course Outcome: On successful completion of the course students will be able to understand the concept of Linux Operating System and all of its functions in the computer system. Students will be able to know how Linux works, how it executes various processes, how it manages compute memory and how it schedules different concurrent processes.

Paper: BCA-HC-6026(Computer Network)

Course Outcome: On successful completion of the course students will be able to understand the concept of Computer Network and all of its applications in the field of information technology. Students will be able to know different types of networks such as LAN, MAN, WAN, PAN etc. and their different functionalities. Students will learn how data packets are transferred between two devices as well as various protocols used during the transmission. Students will learn two models OSI model and TCP/IP and how TCP/IP works to communicate the remote systems.

DSE

Paper: BCA-SE-6016(Automata Theory and Language)

Course Outcome: On successful completion of the course students will be able to understand the theory how a computer system or computer like system read, scan and parse different programming languages to execute an instruction. Students will be able to know different classes of languages and different kind of machines with respect to each language. This paper gives a basic idea how to design a compiler as well as how a compiler scans symbols, that is how it scans a programming language.

Paper: BCA-SE-5066(Artificial Intelligence)

Course Outcome: The objective of this paper is to expose students to the world of technology, innovation, and research. Students will learn various learning methods such as supervised machine learning, unsupervised machine learning, reinforcement machine learning that a system uses to learn itself. Students will learn various algorithms in the field of ANN, DNN etc.

PROGRAMME OUTCOME IN PCDCA

Paper: PGDCAP1 ICT Hardware

It imparts knowledge in computer fundamentals and basic hardware components of computer.

Paper: PGDCAP2 Programming in C

Develop the understanding of algorithm and C programming.

Paper: PGDCAP3 Overview of Operating System (DOS, Windows, UNIX / Linux and Shell Programming)

Develop the understanding of operating systems DOS, Linux and Windows.

Paper: PGDCAP4 Introduction to Office Automation

It imparts the knowledge about Microsoft word, Excel, Access, and PowerPoint.

Paper: PGDCAP5 Database Management System

It imparts the knowledge of managing data using database software.

Paper: PGDCAP6 Data Structure through C language

Develop the understanding of data structure and associated algorithm in C language.

Paper: PGDCAP7 Internet and Web Technology

It develops the knowledge about Internet and web designing.

Paper: PGDCAEL1 GUI Application Programming

It develops the knowledge about the implementations of graphical interfaced applications.

Paper: PGDCA Project Project

Project work to implement practical knowledge of various software already studied in the curriculum

MSC PROGRAMME OUTCOME IN HERBAL SCIENCE & TECHNOLOGY

NON-CBCS PROGRAMME

Paper: INTRODUCTION TO HERBAL SCIENCE

This paper gives historical background and present status of medicinal botany and plant taxonomy.

Paper: CULTIVATION AND POST HARVEST MANAGEMENT OF MEDICINAL PLANTS

This paper deals with cultivation, harvesting, post harvesting managements and conservation strategies of medicinal plants.

Paper: MICROBIOLOGY AND IMMUNOLOGY

This paper imparts knowledge on microorganisms, microbial interaction and industrial microbiology.

The paper also imparts knowledge on human immune system and immunization strategies;

Paper: PHARMACOGNOSY AND PHYTOPHARMACEUTICAL CHEMISTRY

This paper imparts knowledge on phytochemical constituents of plants and its recent advances in the field of Pharmacognosy

Paper: PHARMACOLOGY

This paper imparts knowledge on pharmacological principles, systemic pharmacology, experimental pharmacology and drug screening methods.

Paper: TOXICOLOGY AND PHARMACOKINETICS UNIT:1

This paper imparts knowledge on basic concepts in toxicology, principles of toxicology, basics of pharmacokinetics and heavy metals.

Paper: COMMERCIAL ASPECTS IN HERBAL SCIENCE

This paper imparts knowledge on herbal formulations, dosage form design, quality assurance & marketing of herbal products and export potential of medicinal plants.

Paper: PHYTOCONSTITUENTS

This paper imparts knowledge on primary metabolites, secondary metabolites and pharmacopoeial drugs of plant origin.

Paper: ADVANCED ANALYTICAL TECHNIQUES AND BIOSTATISTICS

This paper imparts knowledge on chromatography, spectroscopy and electrophoresis techniques. It also gives basic knowledge on biostatistics.

Paper: GENOMICS, PROTEOMICS AND BIOINFORMATICS

This paper imparts knowledge on genomic and proteomics, bioinformatics database, predictive methods and basic concepts on computer.

Paper: AGROTECHNOLOGY AND PLANT TISSUE CULTURE TECHNIQUES

This paper imparts knowledge on agrotechnology of medicinal plants, in vitro plant propagation techniques, transgenic plants and methods of secondary metabolite production.

Paper: ETHNOMEDICINES, BIO PROSPECTING OF INDIGENOUS MEDICINAL PLANTS AND CONSERVATION

This paper imparts knowledge on ethnomedicine, their uses and effects in different diseases, bioprospecting and conservation efforts on medicinal plants.

CBCS PROGRAMME

Paper: HST-1016(INTRODUCTION TO HERBAL SCIENCE)

This paper gives historical background and present status of medicinal botany, plant taxonomy and ethnomedicine.

Paper: HST-1026(CULTIVATION AND POST HARVEST MANAGEMENT OF MEDICINAL PLANTS)

This paper deals with cultivation, harvesting, post harvesting managements and conservation strategies of medicinal plants.

Paper: HST-1036(MICROBIOLOGY AND IMMUNOLOGY)

This paper imparts knowledge on microorganisms, microbial interaction and industrial microbiology.

The paper also imparts knowledge on human immune system and immunization strategies;

Paper: HST-2016(PHARMACOGNOSY AND PHYTOPHARMACEUTICALS)

This paper imparts knowledge on phytochemical constituents of plants and its recent advances in the field of Pharmacognosy

Paper: HST-2026(PHARMACOLOGY)

This paper imparts knowledge on pharmacological principles, systemic pharmacology, experimental pharmacology and drug screening methods.

Paper: HST-2036(TOXICOLOGY AND PHARMACOKINETICS)

This paper imparts knowledge on basic concepts in toxicology, principles of toxicology, basics of pharmacokinetics and heavy metals.

