

Anandaram Dhekial Phookan College, Nagaon  
OUTCOME IN DIFFERENT PROGRAMMES & COURSES: 2022-2023

**BA MAJOR PROGRAMME OUTCOME IN ASSAMESE**

**Ist semester:**

**Paper: 1016: Asomiya Sahityar Buranji (Charyapadar Pora Sankari Yugoloi)**

- History of Assamese Literature enhance to understand the Trend & Heritage of Assamese Literature and Era Division, Basic characteristics, creations of significant writers, vastness of Assamese literature from one thousand years back to medieval period.

**Paper: 1026: Uttar Sankari Yugor pora Arunodoi Yugoloi**

- From Medieval periods its Imparts knowledge of the trends and transition of Post-Sankaradeva periods Assamese literature to Modern Assamese literature or Arunodoi (1846) Period.

**2nd semester:**

**Paper: 2016: Bhasa-Bigyan Porichay**

- Introduction of Linguistics Paper Enhance to understand the Evolution of Assamese Language, basic concept of modern linguistics. Besides its enable the students to understand the stages of language and its structures.

**Paper: 2026: Sahitya Somalosona**

- Literary Criticism enable the students to know about Assamese Criticism, its styles and trends. Besides its imparts knowledge about the tradition, definition as well as aspect of criticism from the western to Eastern context.

**3<sup>rd</sup> 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 introduce 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.

**4<sup>rd</sup> semester:**

**Paper: 4016 : Comparative Indian Literature**

This paper enhance the knowledge of the students about the background and primary concept of comparative literature besides a 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: (CBCS)**

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**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 place 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.

**6<sup>th</sup> semester: (CBCS)**

**Paper No : ASM-HE-6016 : Lakhsimanth Bezbarua**

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

**Paper No : ASM-HE-6026 : Banikanta Kakati**

Aim : The aim of this paper is to give an critical and reflective writings of Banikanta Kakati.

**Paper No : ASM-HE-6036 : Assamese children's and young adult literature.**

Aim : The aim of this paper is to introduce the Student's to poems, verse, folktales, plays, essays and epics meant for children / teenager.

**Paper No : ASM-HE-6046 : The Dialects of Assamese language.**

Aim : 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**

**1st Semester :**

**ASM 1016 : Rise and development of the Assamese Language**

1. Reconstruct the social history of Assam in the light of the rise of Assamese Language.
2. Justify the relationship between tradition of religion and formation of Assamese Language.
3. Compare and contrast the social history of early Assamese form of language with that of the Modern Assamese language.

**ASM 1026 : History of Assamese Literature: 1889-2015**

1. Trace the phases of Romantic and Modern Assamese literature.

**ASM 1036 : Study of Culture of Assam**

1. Reconstruct religious belief of the people of Ancient Assam and compare it with that of the rest of ancient India.

**ASM 1046 : History of Sanskrit Literature: History, Features and Genres**

1. Trace the history and heritage of Indian literary tradition.
2. Describe the features of Sanskrit Literature which is considered as the mother of all regional Literature including Assamese.

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3. Grasp the Indianness in Indian Literature.

**3rd Semester:**

**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.

**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.

**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.

**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 Saktism 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.

**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:**

**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

**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.

**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.

**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.

**ASM 4116: Tibeto Burman Language**

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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 vice-versa.

**BA MAJOR PROGRAMME OUTCOME IN ARABIC**

**SEMESTER-I**

**Paper: ARA-HC-1016: Arabic Prose and Poetry – I**

The paper helps the students to improve the communication skill and to know about a selection of Modern Arabic Poetry and Prose Literature.

**Paper: ARA-HC-1026: Political History of the Arabs – I**

The paper emphasizes on the Socio-economic conditions and political history of the Arabs during the Islamic period.

**SEMESTER-II**

**Paper: ARA-HC-2016: Arabic Prose and Poetry-II**

The paper brings to the students some conversion in simple Arabic and a selection of short stories and Modern Arabic Poetry; which is focus social and romantic trends.

**Paper: ARA-HC-2026: Applied Grammar- I**

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

**SEMESTER – III**

**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.

**SEMESTER-IV**

**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

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using them in sentences, writing practice, reading comprehension, typing Arabic alphabet, vocabulary enrichment and conversation practice.

**SEMESTER-V (CBCS)**

**Paper- ARA – HC- 5016 (CBCS) – 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 (CBCS) – 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 (CBCS) – Functional Arabic-1**

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

**Paper –ARA-HE-5026 (CBCS) – Applied Grammar-IV**

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

**Semester VI**

**Paper- ARA – HC- 6016 (CBCS) –Modern Arabic Prose and Poetry-II**

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

**Paper- ARA – HC- 6026 (CBCS) – History of Arabic Literature-II**

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

**Paper- ARA – HE- 6016 (CBCS) - Functional Arabic-II**

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

**Paper- ARA – HE- 6036 (CBCS) – Translation, Comprehension and composition**

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

**BA MAJOR PROGRAMME OUTCOME IN BENGALI**

**BEN-HC-1016: Pragadhunik Sahittya Path 1 (CBCS)**

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

**BEN-HC-1026: Pragadhunik Sahittya Path 2 (CBCS)**

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

**BEN-HC-2016: Bangla Bhasha Parichoi (CBCS)**

It imparts the knowledge of History of Bengali Language.

**BEN-HC-2026: Bangalir Samajik o Sanskritik Parichoi (CBCS)**

It imparts the knowledge of Social-Cultural Identity of Bengali Community

**BEN-HC-3016: Lokosanskriti o Lokosahittya (CBCS)**

It imparts the knowledge of Folk Culture and Literature of Bengal

**BEN-HC-3026: Chando,Alankar o Prachya Kavyatattya (CBCS)**

It imparts the knowledge of Literary Aspects

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

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

**BEN-HC-4016: Bangla Sahittyer Itihas(Adhunikjug) (CBCS)**

It imparts the knowledge of Modern History of Bengali Literature

**BEN-HC-4026: Adunik Bangla Sahittya: Suchana Parba (CBCS)**

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It imparts the knowledge of Modern History of Bengali Literature

**BEN-HC-4036: Rabindra Sahitya (CBCS)**

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

**BEN – HC- 5016 (CBCS) - Modern Bengali Literature: Pre-independence structure.**

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

**BEN – HC- 5026 (CBCS) - Modern Bengali Literature: Post-independence structure.**

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

**BEN-HE-5016 (CBCS) – Children’s and Juvenile Literature**

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

**BEN-HE-5026 (CBCS) – Biographical Literature and Reminiscences**

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

**BEN – HC- 6016 (CBCS) – Literary Theory and Identity**

It imparts the knowledge of literary theory in Bengali Literature

**BEN – HC- 6026 (CBCS) – Western Literary Theory and Criticism**

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

**BEN – HE- 6016 (CBCS) - North-Eastern Bengali Literature**

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

**BEN – HE- 6036 (CBCS) - Research/ Seminar Paper Writings**

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

**BA REGULAR PROGRAMME OUTCOME IN BENGALI**

**For CBCS Syllabus**

**PAPER-BEN-AE1014 (For Honors & Regular Course)**

It imparts the knowledge of writing skills in Bengali Language

**BEN-HG-1016/ BEN-RC 1016 (HG for Honors & RC for Regular Course)**

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

**BEN-HG-2016/ BEN-RC 2016 (HG for Honors & RC for Regular Course)**

It imparts the knowledge of Folk Culture and Literature of Bengal

**PAPER-BEN-SE-3014 (For Honors & Regular Course)**

It imparts the knowledge of how to Writing Manuscript

**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

**PAPER-BEN-SE-4014 (For Honors & Regular Course)**

It imparts the knowledge of Proofreading

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**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 & BSC MAJOR PROGRAMME OUTCOME IN ECONOMICS**

**1<sup>st</sup> Semester**

**Paper 1: ECO- HC- 1016: Introductory Micro Economics**

The paper introduces the economic problems, how markets work, consumption decision of households etc.

**Paper 2: ECO-HC- 1026: Mathematical methods in Economics.**

It imparts knowledge of mathematical tools used in economic analysis.

**2<sup>nd</sup> Semester**

**Paper 3: ECO-HC- 2016: Introductory Macro Economics.**

It. Enables to understand derives of income, savings, investment and employment in an economy.

**Paper 4: ECO-HC- 2026: Mathematical methods for Economics.**

It imparts knowledge of mathematical tools in economic analysis

**3<sup>rd</sup> 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.

**4<sup>th</sup> Semester**

**Paper 8: ECO-4016-Intermediate Micro Economics II**

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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.

**5<sup>th</sup> Semester**

**ECO-HC-5016: INDIAN 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.

**ECO-HC-5026: DEVELOPMENT ECONOMICS-1**

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

**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.

**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.

**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.

**6<sup>th</sup> Semester**

**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.

**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.

**ECO-HE-6016: ENVIRONMENTAL ECONOMICS**

This paper focuses on economic causes of environmental problems. Economic implications of environmental policy are 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.

**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.



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**BA MAJOR PROGRAMME OUTCOME IN EDUCATION**

**1<sup>st</sup> Semester:-**

**EDU-HC-1016 (Principles of Education)** The outcome of the course is to develop the knowledge of various principles, methods and maxims of educational studies.

**EDU-HC-1026 (Psychological Foundation of Education)** To make the students understand about the psychological foundation of education, how the knowledge of different theories of learning, intelligence and personality are important to know the child psychology which will help them to be a better teacher in the future.

**EDU-HG-1016 (Foundations of Education)** The probable outcome of the course is to acquaint the students with the foundation of the subject education.

**2<sup>nd</sup> Semester:-**

**EDU-HC-2016 (Philosophical & Sociological Foundation of Education)** The expected outcome of this course is to familiarize the students with the foundational concept of philosophy, sociology and democracy in education.

**EDU-HC-2026 (Development of Education in India I)** The outcome of the course is to enlighten students with the knowledge of the growth of education in India over the time periods.

**EDU-HG-2026 (Psychology of Adolescents)** Another outcome of the course is to develop the knowledge of adolescent psychology among the students.

**3<sup>rd</sup> Semester:-**

**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.

**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.

**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.

**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.

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

**4<sup>th</sup> Semester:-**

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

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

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

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**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.

**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.

**5<sup>th</sup> Semester:-**

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

This paper enable 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.

**EDU-HC-5026 (GUIDANCE AND COUNSELLING)**

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

**EDU-DSE-5016 (CONTINUING EDUCATION)**

Paper develop 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.

**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.

**6<sup>th</sup> Semester:-**

**EDU-HC-6016 (EDUCATION AND DEVELOPMENT)**

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

**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.

**EDU-DSE-6026 (SPECIAL EDUCATION)**

Paper helps to understand the meaning and importance of special education. Paper familiarise the students with 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.

**EDU-DSC-6036 (EDUCATIONAL MANAGEMENT)**

Paper develop 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**

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**SEMESTER-1 (CBCS)**

**Paper- 1: ENG-HC-1016 Indian Classical Literature**

This paper aims to familiarize students with Classical literature of India in English translation which offers a rich and diverse canvas that spans across genres like drama, poetry, the epic narrative etc.

**Paper- 2: ENG-HC-1026 European Classical Literature**

In his paper students will study a selection of Classical writing in Europe that cut across many genres, which included poetry, theatre, and general discourses.

**SEMESTER-2 (CBCS)**

**Paper- 3: ENG-HC-2016 Indian Writing in English**

This paper introduces students to the historical development of Indian Writing in English - the challenges faced by early writers, the growing sense of accomplishment in the writing of different forms and the interpretation of individual and collective experience in colonial and postcolonial India.

**Paper- 4: ENG-HC-2026 British Poetry and Drama: 14th to 17th Centuries**

This paper aims to familiarize the students with the two major forms in British literature from the 14th to the 17th centuries – poetry and drama, apart from acquainting them with the contexts that generated such literatures.

**SEMESTER-3 (CBCS)**

**Paper 6: 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 5: 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 7: 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 18<sup>th</sup> centuries, a time-period which sees the emergence and establishment of greatly diverse kinds of writings.

**SEMESTER-4 (CBCS)**

**Paper 8: 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 9: 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 10: 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.

**SEMESTER-5 (CBCS)**

**Paper 11: ENG-HC-5016 British Literature: The 20th Century**

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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 12: 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 13: 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 14: 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.

**SEMESTER-6 (CBCS)**

**Paper 15: 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 16: 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 17: ENG-HE-6016 Literature and Cinema**

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

**Paper 18: 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**

Paper & Name	Programme Outcome
Paper 1016: UNDERSTANDING GEOGRAPHY (CBCS)	It enhances to understand Geography through ages since Greek to contemporary period.

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### OUTCOME IN DIFFERENT PROGRAMMES & COURSES: 2022-2023

PAPER 1026: CARTOGRAPHIC TECHNIQUES AND PRACTICAL (CBCS)	This paper will cover an area of basic understanding of Cartographic (art of map making) technique. Map Scale, Thematic Maps etc are some of the essential part of this study.
PAPER 2016: HUMAN GEOGRAPHY (THEORY + PRACTICAL) (CBCS)	Detailed understanding of the subject of Geography has helped to know the Man Environment Relationships and management
PAPER 2026: CLIMATOLOGY AND BIOGEOGRAPHY (THEORY + PRACTICAL) (CBCS)	The detailed study of the subject encompass Climate and Biogeography keeping in view of Man's adjustment to natural environment.
GGY - HC - 3016: Economic Geography(CBCS)	This paper will enhance our student to learn about World Economic Pattern and Resources.
GGY - HC - 3026: Geography of India with special reference to North East India (CBCS)	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 (CBCS)	Thematic Cartography: This paper covers the Thematic Map Making course. This will develop our students to understand data visualization through Maps.
GGY - HC - 4016: Environmental Geography and Disaster Management (CBCS)	This paper will cover Man-Environmental relationships. In this context It also give emphasis on Disaster Management and Preparedness.
GGY - HC - 4026: Population and Settlement Geography (CBCS)	Demography is an essential entity into the subject of Geography. In this paper, students will learn demographic patten of the world.
GGY - HC - 4036: Remote Sensing Techniques and GIS (CBCS)	This is a skill based paper and students will be associated with the basic understanding of Geoinformatics. How Satellite imagery are acquired and stored for accurate map designing is a part of this chapter
GGY - SE - 4024: Surveying Techniques (CBCS)	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.
GGY-HC-5016: Social and Political Geography	This course will help equip the students tocomprehend various social and political aspects of phenomena and their interfacewithin the realm of geography.
GGY-HC-5026: Field Techniques inGeography	This course will help students to proceed with a research problem and the steps she/he shouldadopt and the tools and craft to be employed for doing quality research.
GGY-HE-5046: Agricultural Geography	To understand how different types of agriculture have developed in different areasand how they are similar to or different from one another.
GGY-HE-5036: Urban	It seeks to develop new insights among students on the relevance of an

**Anandaram Dhekial Phookan College, Nagaon**  
**OUTCOME IN DIFFERENT PROGRAMMES & COURSES: 2022-2023**

Geography	urban geography and associated problems in a rapidly urbanizing world.
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.
GGY-HC-6026: Research Methods in Geography and Project Work	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.
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 of an area

**BA MAJOR PROGRAMME OUTCOME IN HINDI**

**1<sup>ST</sup> & 2<sup>ND</sup> Sem : As per CBCS syllabus**

**Paper: HIN –HC-1026: Hindi Sahitya Ka Itihas (ritikal tak)**

It provides the knowledge of Adikalin and Bhaktikalin, ritikalin historical perspectives of Hindi literature.

**Paper: HIN – HC-1026 : Hindi Sahitya ka itihas (Adhunik kal )**

It imparts the knowledge of Modern poets and writers in Hindi literature.

**Paper: HIN-HC-2016: Adikalin evam Madhyakalin Hindi Kavita**

It imparts the knowledge of Ritikalin Hindi Litirature in the historical perspectives.

**Paper: HIN-HC-2026: Adhunik Hindi Kavita (Chhayavad tak)**

It provides the knowledge of chhayavad poets in Hindi literature.

**3<sup>rd</sup> & 4<sup>th</sup> sem : As per CBCS syllabus**

**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

**Paper : HIN – HC- 4016 Bhasha vijnan, Hindi Bhasha evam Devnagari Lipi**

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

**Paper : HIN – HC- 4026 : Hindi Katha Sahitya**

Its 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**

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

**5th & 6th Sem: As per CBCS syllabus.**

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

This paper enhance 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 enhance 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.

**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 Bhartendu era till now show that they can seek livelihood in this field .

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

This paper introduced the awaken 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 (Chayawadi 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 munshipremchand , through special study of selected works (novel,drama,essay, stories) to make them well acquainted with popular litterateur is the main aim of the paper.

**BA MAJOR PROGRAMME OUTCOME IN HISTORY**

Semester 1 (M)

**Paper- HIS-HC-1016: History of India- I (Earliest times to 300 BCE)**

The paper aims to acquaint the students about the stages of evolution and development of the human civilisation.

**Anandaram Dhekial Phookan College, Nagaon**  
**OUTCOME IN DIFFERENT PROGRAMMES & COURSES: 2022-2023**

**Paper-HIS-HC-1026: Social Formation and Cultural Patterns of the Ancient World**

After completion of the course, the students will be able to explain the historical, socio-political, administrative and economic patterns of the ancient world.

Semester II (M)

**Paper-HIS-HC-2016: History of India II (BCE 300-750)**

This course aims to explain the economic and socio-cultural connections and transition during the ruling dynasties of ancient India.

**Paper-HIS-HC-2026: Social Formations and Cultural Pattern of the Medieval World**

This course attempts to analyse and explain the historical, socio-cultural, administrative and economic patterns of the medieval world.

Semester III (M)

**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-SEC- 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.

Semester IV (M)

**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'.

Semester V(M)

**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.

**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.



**Anandaram Dhekial Phookan College, Nagaon**  
**OUTCOME IN DIFFERENT PROGRAMMES & COURSES: 2022-2023**

**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 13<sup>th</sup> century.

**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.

Semester VI(M)

**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.

**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.

**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.

**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**

Semester 1

**Paper- HIS-HG-1016: History of India from Earliest Times to c 1206**

This paper deals with the historical timeline of India from the birth of human civilization to the arrival of the Delhi Sultanate in Indian history.

Semester 2

**Paper-HIS-HG-2016- History of India (1206-1757)**

This paper shall teach about the history of India from the period of the Delhi Sultanate up to the coming of the British and the Battle of Plassey.

Semester 3

**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..

Semester 4

**Paper- HIS-HG-4016- 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.

Semester 5

**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.

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**OUTCOME IN DIFFERENT PROGRAMMES & COURSES: 2022-2023**

**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.

Semester 6

**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**

Semester I

**Paper: Course HIS 1016 (Theory and Method)**

This paper is about multidisciplinary approach to understand the changing trends.

**Paper: Course HIS 1026 History of Assam (Earliest times to 1228 CE)**

This paper is about development of various ethnic groups of people in ancient Assam.

**Paper: Course HIS 1036 Colonialism, Imperialism and Resistance in India (1757-1857)**

The paper is about establishment of British power in India.

**Paper: Course HIS 1046 History of East Asia: China and Japan (1839-1949 CE)**

This paper is about the History of East Asia, beginning with the opening of China to the west.

Semester II

**Paper: Course HIS 2016(Historiography)**

This paper is about historical scholarship and methodical approach to history.

**Paper: Course 2026: History of Assam (1228-1826)**

This paper is about political structure in the Brahmaputra valley.

**Paper: Course HIS203C6: Social history of Modern India**

The paper is about the Indian society during the Colonial period.

**Paper: Course HIS2046: Twentieth Century World history**

The paper is about the dominant ideologies of the 20<sup>th</sup> century.

Semester III

**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)**

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**OUTCOME IN DIFFERENT PROGRAMMES & COURSES: 2022-2023**

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

Semester IV

**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 Peasants 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 & GENERAL PROGRAMME OUTCOME IN  
PHILOSOPHY**

**SEMESTER- I (CBCS)**

PAPER (MAJOR)- PHI-HC-1016

CORE 1: INDIAN PHILOSOPHY I

This paper explores the Vedas, Upanisads, Bhagavadgita and the development of Indian Philosophy. It mainly focuses on three different schools of Indian Philosophy namely Carvaka, Jainism and Buddhism. It also explores the different Buddhist schools.

PAPER (MAJOR)- PHI-HC-1026

CORE 2: LOGIC-I

This paper concentrates on developing the logical, reasoning and argumentative skills of students. It mainly concentrates on traditional logic or the Aristotelian logic.

**SEMESTER I (CBCS)**

PAPER (GENERAL)- PHI-HG-1016/PHI-RC-1016

GE 1: GENERAL PHILOSOPHY

This paper deals with some general philosophical issues like nature and scope of philosophy, Realism and Idealism, Substance, Causality, Empiricism, Rationalism, Theories of Truth etc.

**SEMESTER- II (CBCS)**

PAPER (MAJOR)- PHI-HC-2036

CORE 3: GREEK PHILOSOPHY

This paper focuses on Greek Philosophy. It deals with the Pre-Socratic philosophers, the Sophists and Socrates and also the Post-Socratic philosophers namely Plato and Aristotle.

PAPER (MAJOR)- PHI-HC-2046

CORE 4: LOGIC-II

This paper deals with Modern Logic otherwise known as Symbolic Logic.

**SEMESTER II (CBCS)**

PAPER (GENERAL)- PHI-HG-2026/PHI-RC-2026

GE 2: INDIAN PHILOSOPHY

This paper deals with various schools of Indian Philosophy like Buddhism, Jainism, Samkhya, Nyaya and Vedanta.

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**OUTCOME IN DIFFERENT PROGRAMMES & COURSES: 2022-2023**

**SEMESTER-III (CBCS)**

PAPER (MAJOR)- 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 (MAJOR)- 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.

CORE 7: ETHICS

PAPER (MAJOR)- PHI-HC-3076

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.

SEC 1 (CBCS)

REASONING AND LOGIC

This paper deals with different types of logical and reasoning. It also involves reasoning exercises.

**SEMESTER III (CBCS)**

PAPER (GENERAL)- PHI-HG-3036/ PHI-RC-3036

GE 3: 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.

**SEMESTER- IV(CBCS)**

CORE 8: CONTEMPORARY INDIAN PHILOSOPHY

PAPER (MAJOR)- PHI-HC-4086/PHI-RE-5016

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

CORE 9: PHILOSOPHY OF RELIGION

PAPER(MAJOR)- PHI-HC-4096/PHI-RE-6026

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.

CORE 10: POLITICAL AND SOCIAL PHILOSOPHY

PAPER (MAJOR)- PHI-HC-4106

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

SEC 2 (CBCS)

CRITICAL THINKING

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

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**OUTCOME IN DIFFERENT PROGRAMMES & COURSES: 2022-2023**

**SEMESTER IV (CBCS)**

**PAPER (GENERAL)- PHI-HG-4046/ PHI-RC-4046**

**GE 4: LOGIC**

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

**SEMESTER V- MAJOR (CBCS)**

**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.

**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.

**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.

**PHI-HE-5026 (Philosophy of Gita)**

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

**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.

**SEMESTER VI- MAJOR (CBCS)**

**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.

**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.

**PHI-HE-6016 (Western Philosophy – Textual Study)**

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

**PHI-HE-6026 (Philosophy of Language)**

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

**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.

Anandaram Dhekial Phookan College, Nagaon  
OUTCOME IN DIFFERENT PROGRAMMES & COURSES: 2022-2023

**BA MAJOR PROGRAMME OUTCOME IN POLITICAL SCIENCE**

**1<sup>ST</sup> SEM (CBCS): Understanding Political Theory; 1016**

The outcome of the course is to understand the history and approaches of the Political Theory and to reconcile Political Theory and practice through reflection on the ideas and practices related to democracy.

**1<sup>st</sup> SEM (CBCS): Constitutional Government And Democracy In India; 1026**

This paper tries to understand the Indian Constitution particularly liberty, justice, territorial decentralization and a Constitutional setup of India.

**2<sup>nd</sup> SEM (CBCS): Political Theory- Concept And Debates; 2016**

The outcome of this course is to understand the Political Theory and debates throughout the world. Each concept is related to a critical political issue that requires analysis with the aid of our conceptual understanding.

**2<sup>nd</sup> SEM (CBCS): Political Process In India; 2026**

This paper tries to understand political process of our country like political parties, voting behavior, regional aspiration, etc.

**3<sup>rd</sup> SEM (CBCS): 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.

**3<sup>rd</sup> SEM (CBCS): 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.

**3<sup>rd</sup> SEM (CBCS): 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.

**4<sup>th</sup> SEM (CBCS): Political Process And Institutions In Comparative Perspectives; 4016**

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

**4<sup>th</sup> SEM (CBCS): 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.

**4<sup>th</sup> SEM (CBCS): Global Politics; 4036**

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

**5<sup>th</sup> SEM (CBCS)**

**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.

**POL HC 5026: Indian Political Thought-I**

**Anandaram Dhekial Phookan College, Nagaon**  
**OUTCOME IN DIFFERENT PROGRAMMES & COURSES: 2022-2023**

The basic focus of study are 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)**

**POL HE 5016: Human Rights**

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

**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.

**BA 5<sup>th</sup> SEM (CBCS) (Honours)**

**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.

**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)**

**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.

**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**

**CBCS Course( Hons.)**

- PAPER: SKT- HC-1016

**Classical Sanskrit Literature (Poetry )**

This paper gives an idea of classical Sanskrit poetry.

- PAPER: SKT- HC-1026

**Critical Survey of Sanskrit Literature**

This paper gives an idea of Sanskrit literature (from Vedic literature to Puranas).

- PAPER: SKT-HC-2016

**Classical Sanskrit Literature (Prose)**

This paper gives the knowledge of classical sanskrit prose literature.

- PAPER: SKT-HC-2026

**Self-Management in the Gita**

This paper gives an idea of the philosophy of self-management in the Gita.

- PAPER: SKT-HC-3016

**Classical Sanskrit Literature (Drama)**

This paper gives the knowledge of Sanskrit Drama

- PAPER: SKT-HC-3016

**Poetics and Literary criticism**

**Anandaram Dhekial Phookan College, Nagaon**  
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This paper gives an idea of Sanskrit poetics, forms of Kavya Literature, Alamkara etc.

- PAPER: SKT-HC-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

- 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.

- **SKT-HC-5016: VEDIC LITERATURE**

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

- **SKT-HC-5026: SANSKRIT GRAMMAR**

This paper gives the idea of general Sanskrit Grammar.

- **SKT-HE-5026: THEATRE AND DRAMATURGY**

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

- **SKT-HE-5036: SANSKRIT LINGUISTIC**

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

- **SKT-HC-6016: ONTOLOGY AND EPISTEMOLOGY**

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

- **SKT-HC-6026: SANSKRIT COMPOSITION AND COMMUNICATION**

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

- **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.

- **SKT-HE-6036: KAMARUPA SCHOOL OF DHARMASTRA**

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**

- PAPER: SKT-HG-1016

**Basic Sanskrit**

This paper gives the idea of grammar and composition and also gives the idea of literature

- PAPER: SKT-HG-2016

**Indian Culture and Social Issues**



This paper gives the knowledge of culture in a multicultural society and cultural roots of India

- 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.

- 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.

**BSC MAJOR PROGRAMME OUTCOME IN BOTANY**

FOR CBCS COURSE

**BOT-HC-1016: Phycology and Microbiology (THEORY)**

Course imparts detailed knowledge on microbes, viruses and bacteria, and their importance in agriculture and medicine, Knowledge on Algal classification, Economic and ecological importance of Algae.

(PRACTICAL) Practical knowledge on structure of T-Phage and TMV, lytic and lysogenic life cycle, Practical knowledge on microscopy of bacteria and algae

**BOT-HC-1026: Biomolecules and Cell Biology(THEORY)**

Course imparts knowledge on structure, classification and physicochemical properties of biomolecules and Enzymes, detailed knowledge on structure, properties and functions of cell and its components.

(PRACTICAL) Practical knowledge on properties of cell and cell membrane, DNA staining techniques and microscopy of plant cell. Knowledge on qualitative tests of biomolecules

**BOT-HC-2016: Mycology and Phytopathology(THEORY)**

Course imparts detailed knowledge on different classes of fungi, their structure, classification, life cycle and reproduction, diseases in plants caused by viruses, bacteria and fungi and biotechnological applications of fungi.

(PRACTICAL) Structural analysis of different classes of fungi and their reproductive stages, Knowledge on structures of symbiotic associations (Lichens, Mycorrhiza)

**BOT-HC-2026: Archegoniate(THEORY)**

Course imparts detailed knowledge on morphology, anatomy, classification and properties of bryophytes, pteridophytes and gymnosperms, Knowledge on reproduction and economic importance and ecological significance of bryophytes, pteridophytes and gymnosperms.

(PRACTICAL) Practical knowledge on morphology and reproductive structures of archegoniate, Spore morphology analysis and detailed knowledge on male and female reproductive structures in gymnosperms

**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

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

**OUTCOME IN DIFFERENT PROGRAMMES & COURSES: 2022-2023**

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

**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

**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

**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 tropical 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

**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.

**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.

**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**

**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.

**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.

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### OUTCOME IN DIFFERENT PROGRAMMES & COURSES: 2022-2023

#### 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.

#### 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

#### 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.

#### BOT-HE-6036 PROJECT WORK/DISSERTATION

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

### **BSC MAJOR PROGRAMME OUTCOME IN CHEMISTRY**

#### **First Semester**

#### **Paper Code: CHE-HC-1014: INORGANIC CHEMISTRY-I**

**Course Objectives:** This course aims at giving students theoretical understanding about the basic constituents of matter – atoms, ions and molecules in terms of their electronic structure and reactivity. Structure and bonding in/of these are to be dealt with basic quantum chemistry treatment. Reactivity of chemical species based on their electron transfer affinity is introduced. Further, periodic classification of elements in the periodic table and changes in properties along the periods and groups to be studied in detail. Accompanying laboratory course is designed for students to have hands-on experience of basic quantitative analytical techniques related to volumetric titrations.

**Learning Outcome:** On successful completion, students would have clear understanding of the concepts related to atomic and molecular structure, chemical bonding, periodic properties and redox behaviour of chemical species. Students will also have hands on experience of standard solution preparation in different concentration units and learn volumetric estimation through acid-base and redox reactions.

#### **Paper Code: CHE-HC-1012: LAB**

Through the laboratory experiments carried out the students will learn about the processes of estimation of metals.

#### **Paper Code: CHE-HC-1024: PHYSICAL CHEMISTRY I**

**Course objective:** This course contains states of matter- gaseous, liquid and solid states along with ionic equilibria. A small unit of molecular and crystal symmetry is also there in the course.

**Learning outcome:** In gaseous state unit the students will learn the kinetic theory of gases, ideal gas and real gases. In liquid state unit, the students are expected to learn the qualitative treatment of the structure of liquid along with the physical properties of liquid, viz, vapour pressure, surface tension

OUTCOME IN DIFFERENT PROGRAMMES & COURSES: 2022-2023

and viscosity. In the molecular and crystal symmetry unit they will be introduced to the elementary idea of symmetry which will be useful to understand solid state chemistry and group theory in some higher courses. In solid state unit the students will learn the basic solid state chemistry application of x-ray crystallography for the determination of some very simple crystal structures. The students will also learn another important topic "ionic equilibria" in this course.

**Paper Code: CHE-HC-1022: LAB**

Through the laboratory experiments carried out the students will learn about the processes of determination of surface tension, viscosity, pH etc.

**Second Semester**

**Paper Code: CHE-HC-2014: ORGANIC CHEMISTRY I**

**Course Objectives:** This course aims at giving students theoretical understanding about the basic constituents of matter – atoms, ions and molecules in terms of their electronic structure and reactivity. Structure and bonding in/of these are to be dealt with basic quantum chemistry treatment. Reactivity of chemical species based on their electron transfer affinity is introduced. Further, periodic classification of elements in the periodic table and changes in properties along the periods and groups to be studied in detail. Accompanying laboratory course is designed for students to have hands-on experience of basic quantitative analytical techniques related to volumetric titrations.

**Learning Outcome:** On successful completion, students would have clear understanding of the concepts related to atomic and molecular structure, chemical bonding, periodic properties and redox behaviour of chemical species. Students will also have hands on experience of standard solution preparation in different concentration units and learn volumetric estimation through acid-base and redox reactions.

**Paper Code: CHE-HC-2012: LAB**

Through the laboratory experiments carried out the students will learn about the processes of purification of organic compounds, determination of melting and boiling points of organic compounds etc.

**Paper Code: CHE-HC-2024: PHYSICAL CHEMISTRY II**

**Course Objective:** In this course the chemical thermodynamics, chemical equilibrium, solutions and colligative properties will be taught to the students. Another unit of this course is systems of variable compositions.

**Learning Outcome:** In this course the students are expected to learn laws of thermodynamics, thermochemistry, thermodynamic functions, relations between thermodynamic properties, Gibbs Helmholtz equation, Maxwell relations etc. Moreover the students are expected to learn partial molar quantities, chemical equilibrium, solutions and colligative properties. After completion of this course, the students will be able to understand the chemical systems from thermodynamic point of view.

**Paper Code: CHE-HC-2022: LAB**

Through the laboratory experiments carried out the students will learn about the experiments of thermochemistry.

**Third semester**

**Paper Code: CHE-HC-3014: 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 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 Code: 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 Code: CHE-HC-3024: 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 Code: 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 Code: 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.

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**Paper Code: 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 Code: 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.

**Fourth Semester**

**Paper Code: CHE-HC-4014: 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 Code: 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 Code: CHE-HC-4024: ORGANIC CHEMISTRY-III**

**Course Objectives:** The course intrudes 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 hetrocyclic compounds/explain their structure mechanism and reactivity/critically examine their synthesis and reactions mechanism.

**Paper Code: CHE-HC-4022: LAB**

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

**Paper Code: CHE-HC-4034: 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.

**Paper Code: CHE-HC-4032: LAB**

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

**Paper Code: 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.

**Fifth Semester**

**Paper Code: 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 Code: CHE-HC-5012: LAB**

**Course Objectives:** This course gives practical knowledge for estimation of glycine, proteins, determination of saponification value and iodine number of oils/fats, isolation of DNA from onion.

**Learning Outcome:** Students will get a practical knowledge on determination of amount of glycine and proteins in a given sample. They will get a sound knowledge on determination of saponification value and iodine number of oils/fats.

**Paper Code: 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

OUTCOME IN DIFFERENT PROGRAMMES & COURSES: 2022-2023

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 Code: 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 Code: 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 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 Code: 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 Code: 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 Code: CHE-HE-5052: Lab**



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**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.

**Paper Code: CHE-HC-6016: INORGANIC CHEMISTRY-IV**

**Course Objective:** 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 Code: CHE-HC-6012: LAB**

**Course Objectives:** This course gives a practical knowledge on qualitative analysis of an unknown inorganic salt mixture.

**Learning Outcome:** After successful completion of the course students will get a practical knowledge on semimicro analysis technique of inorganic salts.

**Paper Code: 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 Code: CHE-HC-6022: LAB**

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

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

**Paper Code: CHE-HE-6016: GREEN CHEMISTRY**

**Course Objective:** The learners will be taught about the emerging discipline of 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 Code: 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 Code: 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**

**PAPER → MAT- HC 1016: CALCULUS**

It is applicable as a rate measure and various geometrical problems.

**PAPER → MAT- HC 1026 ALGEBRA**

It imparts the knowledge about the operation of algebra and Algebraic function & has immense applications in physics and chemistry also.

**PAPER → MAT- HC 2016 REAL ANALYSIS**

It imparts the knowledge about real number system and it has immense applications in engineering etc. Also have wide range of applications in real life scenario.

**PAPER → MAT- HC 2026 DIFFERENTIAL EQUATION**

This paper deal with rate of change of various terms w.r.t. time ,also applicable in engineering. Students can introduce to the exciting world of differential equations, mathematical modeling and their applications.

**PAPER → MAT-HC3016:THEORY OF REAL FUNCTION**

It imperts the knowlegdge 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**

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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.

**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 non linear 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.

**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 centre 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 behaviour 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.

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**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.

**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 Riemann Integrable functions and the application of the fundamental 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, Queueing 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**

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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.

#### BSC MAJOR PROGRAMME OUTCOME IN PHYSICS

Semester	Paper	Paper Name	Outcome
I	PHY-HC-1016	Mathematical Physics I	Students should be able to understand vector and its applications in various fields, differential equations and its applications, different coordinate systems, concept of probability and error.
	PHY-HC-1026	Mechanics	Students should be able understand different aspects of Newtonian and Galilean mechanics.
	---	Practical	Develop the experimental knowledge
II	PHY-HC-2016	Electricity & Magnetism	Understand electric and magnetic fields in matter
	PHY-HC-2026	Waves & Optics	Understand different types of wave motions and their related phenomena
	---	Practical	Develop the experimental knowledge of
III	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.
	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.
	PHY-HC-3036	Digital Systems & Applications	Student will be able to understand the working principle of different digital devices
	---	Practical	Develop the experimental knowledge
	PHY-SE-3074	Applied Optics	Experimental knowledge of Modern Optics.
IV	PHY-HC-4016	Mathematical Physics III	Students will 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 covariant tensors, indices rules for combining tensors.
	PHY-HC-4026	Elements of Modern Physics	Students will be able to understand modern development in Physics,
	PHY-HC-4036	Analog Systems & Applications	Students will be able to understand about the physics of semiconductor

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		Practical	Develop the experimental knowledge
	PHY-SE-4014	Basic Instrumentation Skills	To get exposure with various aspects of instruments and their usage through hands-on mode.
V	PHY-HC-5016	<b>Quantum Mechanics &amp; Applications</b>	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.
	PHY-HC-5026	<b>Solid State Physics</b>	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.
	PHY-HE-5046	<b>Physics of Devices and Instruments</b>	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.
	PHY-HE-5056	<b>Nuclear and Particle Physics</b>	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.
	PHY-HC-6016	<b>Electromagnetic Theory</b>	On successful completion of the course students will acquire the concepts of Maxwell's equations, propagation of

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VI			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.
	<b>PHY-HC-6026</b>	<b>Statistical Mechanics</b>	On successful completion of the course 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.
	<b>PHY-HE-6016</b>	<b>Communication Electronics</b>	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.
	<b>PHY-HE-6046</b>	<b>Astronomy and Astrophysics</b>	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.

**BSC MAJOR PROGRAMME OUTCOME IN STATISTICS**

CBCS:

Paper: STAT-C 101- Descriptive Statistics

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It imparts knowledge of designing Schedule and questionnaire to collect statistical data and their representation, analysis, formation of frequency distribution table and measurement of location, dispersion and variability of data. Also impart the knowledge about relationship between variables by using correlation and regression analysis and about the knowledge of the different index numbers as economic barometer.

**Paper: STAT-C 102- Calculus**

It imparts knowledge of differential calculus, different theorems of differential calculus, maxima and minima of a function. Also it imparts knowledge of integral calculus and different types of differential equations.

**Paper 103: Practical Work**

It imparts practical knowledge of using Statistical tools and techniques in both discrete and continuous frequency distribution, Graphical representation of data, Correlation coefficient, lines of regression and calculation of index numbers.

**Paper: STAT-C 201- Probability and Probability Distribution**

It imparts knowledge of occurrence of chances of any event and various probability functions, mathematical expectations of random variables and standard probability distributions.

**Paper STAT-C 202: Algebra**

It imparts knowledge of Theory of equations, applications of matrix algebra in linear transformations and solving of linear equations in both homogeneous and non homogeneous cases, rank of matrices and determinant of matrices.

**Paper 203: Practical Work**

It imparts practical knowledge of fitting of standard probability distributions with given data set.

**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.

**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



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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.

**Paper404: 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.

**Paper STA-HC 5016: Stochastic Processes and Queuing Theory**

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

**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.

**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

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collection, preparation of database, analysis using software like SPSS, EXCEL, R and preparation of final report on particular topic.

**BSC MAJOR PROGRAMME OUTCOME IN ZOOLOGY**

**CORE COURSE I CODE: ZOO-HC-1016 NON-CHORDATES I: PROTISTS TO PSEUDOCOELOMATES**

It is aimed to introduce students to lower non chordates, their characteristics, classification and important members including practical demonstrations.

**CORE COURSE II CODE: ZOO-HC-1026 PRINCIPLES OF ECOLOGY**

It deals with the basic concepts of our environment and importance of different aspects of ecological study to for conservation and sustainable development.

**CORE COURSE III CODE: ZOO-HC-2016 NON-CHORDATES II: COELOMATES**

It introduces the students to higher non-Chordates and include Practicals to study live and museum specimens.

**CORE COURSE IV CODE: ZOO-HC-2026 CELL BIOLOGY**

Helps in understanding the various structures present in a living cell and their functions.

**CORE COURSE V DIVERSITY OF CHORDATA CODE: ZOO-HC-3016**

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

**CORE COURSE VI ANIMAL PHYSIOLOGY: CONTROLLING AND COORDINATING SYSTEMS CODE: ZOO-HC-3026**

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

**CORE COURSE VII FUNDAMENTALS OF BIOCHEMISTRY CODE: ZOO-HC-3036**

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

**CORE COURSE VIII COMPARATIVE ANATOMY OF VERTEBRATES CODE: ZOO-HC-4016**

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

**CORE COURSE IX ANIMAL PHYSIOLOGY: LIFE SUSTAINING SYSTEMS CODE: ZOO-HC-4026**

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

**CORE COURSE X BIOCHEMISTRY OF METABOLIC PROCESSES CODE: ZOO-HC-4026**

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

**CORE COURSE XI MOLECULAR BIOLOGY CODE: ZOO-HC-5016**

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

**CORE COURSE XII PRINCIPLES OF GENETICS CODE: ZOO-HC-5026**

Helps in understanding of the principles of genetics and inheritance.

**CORE COURSE XIII DEVELOPMENTAL BIOLOGY CODE: ZOO-HC-6016**

Helps in understanding of the Embryonic development in animals.

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**CORE COURSE XIV EVOLUTIONARY BIOLOGY CODE: ZOO-HC-6026**

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

**DISCIPLINE SPECIFIC ELECTIVE COURSE**

**COMPUTATIONAL BIOLOGY & BIostatISTICS CODE: ZOO-HE-5016**

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

**ENDOCRINOLOGY CODE: ZOO-HE-5036**

Helps in understanding of the Endocrinology, hormones and their functioning

**FISH AND FISHERIES CODE: ZOO-HE-6026**

Helps in understanding of the principles of genetics and inheritance.

**DISSERTATION CODE: ZOO-HE-6056**

Dissertation on Zoology Specific subject

**PROGRAMME OUTCOME IN COMMERCE**

**OUTCOME OF HONOURS COURSES UNDER B.COM. CBCS PROGRAMME**

1<sup>st</sup> Semester:

1. **BCM-AE-1014 Business Communication**  
It imparts correct practices of the strategies of effective Business writing and enhances interacting abilities for organizational purposes.
2. **COM-HC-1026 Financial Accounting**  
It teaches how to focus on money management, financial recording and reporting in business.
3. **COM-HC-1036 Business Law**  
It imparts knowledge about the legal environment of business and describes the relationship of ethics and law in business.
4. **COM-GE-1046(A) Micro Economics**  
It helps in learning decision making based on the allocation of limited resources and analyse the market mechanisms.
5. **COM-GE-1046(B) Investing in Stock Markets**  
It imparts knowledge of making rational investment decisions and encourages participation and risk-taking behaviour in the capital market.

2<sup>nd</sup> Semester

1. **ENV-AE-2014 Environmental Studies**  
It helps in understanding our living and physical environment and developing sustainable strategies to protect the environment.
2. **COM-HC-2026 Corporate Accounting**  
It develops a comprehensive understanding of the accounting of a corporate group.
3. **COM-HC-2036 Corporate Laws**  
It imparts knowledge on company laws, securities regulations, business laws and competition laws.

**OUTCOME IN DIFFERENT PROGRAMMES & COURSES: 2022-2023**

- 4. COM-GE-2046(A) Macro Economics**  
It helps in understanding the functioning of a complicated modern economic system and the large-scale operations of market system.
- 5. COM-GE-2046(B) Insurance & Risk Management**  
It helps in understanding the basic principles of risk management and insurance and gain knowledge of insurance contracts, provisions and operations.

3<sup>rd</sup> Semester

- 1. COM-HC-3016 Computer Applications in Business**  
It helps in understanding various methods in which IT can be used to support business and strategies.
- 2. 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.
- 3. COM-HC-3036 Management Principles and Applications**  
It improves understanding on how to manage an organization and helps in evolution of efficient managers.
- 4. COM-GE-3046(A) Business Statistics**  
It gives knowledge of analysing past performance, predicting future business practices and lead organizations effectively.
- 5. 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.
- 6. COM-SEC-HC-3054(A) Entrepreneurship**  
It teaches students crucial life skills like planning, focus, teamwork, persistence and goal setting.
- 7. COM-SEC-HC-3054(B) New Venture Planning**  
It imparts knowledge of identifying new business opportunities and researching & developing new business concepts and strategies.

4<sup>th</sup> Semester

- 1. COM-HC-4016 Cost Accounting**  
It imparts knowledge of cost control and cost reduction for optimizing cost efficiency.
- 2. COM-HC-4026 Business Mathematics**  
It increases the maths knowledge and skills in solving business and finance problems.
- 3. COM-HC-4036 Human Resource Management**  
It imparts knowledge of structuring team for building organisation culture.
- 4. 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.
- 5. COM-GE-4046(B) Micro Finance**  
It explains the importance of micro finance as a powerful instrument against poverty and achievement of financial sustainability.
- 6. 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.
- 7. COM-SEC-HC-4054(B) E-Filing of Returns**  
It intends to equip the students with understanding of knowledge of e-filing of tax returns.

**B.com 5<sup>th</sup> semester**

**1. 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.

**2. 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.

**3. 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.

**4. COM-DSE-HC-5036(D) Banking**

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

**5. COM-DSE-HC-5036(F) Indian Financial System**

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

**B.com 6<sup>th</sup> semester**

**1. 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.

**2. 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.

**3. 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.

**4. COM-DSE-HC-6036(B) Consumer Affairs and Customer Care**

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

**5.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**

**BCA PROGRAMME**

Semester - I (CBCS)

Paper BCA-HC-1016 Introduction to C programming

Develop the understanding of algorithm and C programming.

Paper BCA-HC-1026 Computer Fundamentals & ICT Hardware

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

Paper ENG-AE-1014 English Communication

Developments of English language for communications.

Paper BCA-HG-1026: Office Automation

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

Semester - II (CBCS)

Paper BCA-HC-2016 Mathematics –I

It imparts the knowledge of basic mathematics like matrices, determinants, complex number and calculus.

Paper BCA-HC-2026 Digital Logic Fundamentals

It imparts understanding of digital logic gates and circuits.

Paper ENV-AE-2014 Environmental Studies

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It develops knowledge in environmental science.

Paper BCA-HG-2026: Basic Electronics

It develops knowledge in electronics in basic level.

Semester - III (CBCS)

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.

Semester - IV (CBCS)

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.

**Semester - V (CBCS)**

**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.

**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 schedule 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**

**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.

**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.

**Semester VI**

**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 schedule different concurrent processes.

**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**

**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.

**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.

**PGDCA PROGRAMME**

**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**

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It develop the knowledge about Internet and web designing.

**Paper PGCAEL1                      GUI Application Programming**

It develop 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:1: INTRODUCTION TO HERBAL SCIENCE**

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

**PAPER:2: CULTIVATION AND POST HARVEST MANAGEMENT OF MEDICINAL PLANTS**

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

**PAPER: 3: 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: 6: PHARMACOGNOSY AND PHYTOPHARMACEUTICAL CHEMISTRY**

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

**PAPER:7: PHARMACOLOGY**

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

**PAPER:8: TOXICOLOGY AND PHARMACOKINETICS UNIT:1**

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

**PAPER 11: 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: 12 PHYTOCONSTITUENTS**

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

**PAPER: 13 ADVANCED ANALYTICAL TECHNIQUES AND BIostatISTICS**

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

**PAPER: 16: GENOMICS, PROTEOMICS AND BIOINFORMATICS**

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

**PAPER: 17: AGROTECHNOLOGY AND PLANT TISSUE CULTURE TECHNIQUES**



**Anandaram Dhekial Phookan College, Nagaon**  
**OUTCOME IN DIFFERENT PROGRAMMES & COURSES: 2022-2023**

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

**PAPER: 18: ETHNOMEDICINES, BIO PROSPECTING OF INDIGENIOUS 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 MEDICINALPLANTS**

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.