Kamrup College, Chamata (Nalbari)

(Affiliated to Gauhati University, Re-Accredited by NAAC with 'A' Grade)
ISO 9001:2015 Certified
Website: www.kamrupcollege.co.in
E-mail: kcc1966@rediffmail.com

Programme Outcome/Programme Specific Outcome/Course Outcome

Programme outcome for B.A. & B.Sc:

Arts Stream

The Bachelor of Arts requires three years of full time study consisting of six semesters. The college offers 10 Major Courses and 11 general courses in arts subjects: Assamese, Arabic, English, Education, Economics, History, Philosophy, Political Science, Mathematics and Sanskrit. The Arts degrees are focused on increasing students' knowledge and critical thinking in accordance to the syllabus and curriculum prescribed by the Gauhati University. These courses aim to prepare students with a sound knowledge and skills, develop critical thinking, to be acquainted with the emerging issues connected across geographical, disciplinary, social and cultural boundaries, understand the need and importance of national integration, international understanding and promote democratic values.

Programme :Assamese(Major)

Semester	Course code	Paper's Name	Objectives
First Semester	ASM (M) 104	History of AssameseLiterature and Script	• Trace the history and heritage of Assamese Literature • Trace the development of Assamese script
	ASM (M) 105	Ancient Assamese Poetry	• Trace the development of ancient Assamese poetry • Explain the characterization of ancient Assamese poetry

Second Semester	ASM (M) 204	History of Assamese Literature (Post-Sankardeva era to Abahanera.	• Categories of Assamese history from post Sankardeva to Abahonera • Emphasied about the development and trend of Assamese Literature
	ASM (M) 205	Modern Assamese Poetry	• Trace the development of modern Assamese poetry • Explain the characterization of modern Assamese poetry • Draw an outline of romanticism, modernism, its nature, concept etc.
Third Seme ster	ASM (M) 304	Assamese Language	• Trace the history of Assamese Language and its development • Explain about its original roots
	ASM (M) 305	Special Study of Assamese Literature (Special authors Sankardeva & LakshminathBezbaruah)	• Trace the two great author ancientand modern Assamese literature. • Describe about the Assamese ancient drama, devotional songs • To know about the one act playand poetry of Sannkardeva • Describe about modern Assamese romantic poem, drama
Fourth Semes ter	ASM (M) 401	Assamese Grammar	• Trace the Assamese GrammarTo know about the history of Assamese Grammar • Categories of Grammar
	ASM (M) 402	Introductory study onAssamese Caste and Culture	• Describe about Assamese Caste, Community, its Culture • Describe how to build up a great Assamese society
	ASM (M) 403	Field Study (Project preparation)	• Design a research project according to relevant methodologies with knowledge ofdifferent aspect of theoretical andethical concerns. • Analysis the collection of relevantdata
Fifth Semester	ASM (M) 501	Ancient Assamese Drama	• Explain the trend of ancient

			Assamese Drama. • Trace about ancient artificial Language of Brajabuli • Draw a outline about New Vaishnavisim theory • Illustrate about folk performing art from
	ASM (M) 502	Ancient Assamese Prose Literature	• Trace about ancient Assamese Prose • Draw a outline about ancient poet
	ASM (M) 503	Study on Brajabuli Literature	• Trace about Indian Brajabuli Literature and Assamese Brajabuli literature • Categories of Indian Brajabuli poet. • Explain about Indian Brajabuli Literature
	ASM (M) 504	Pali-Prakrit Literature and Grammar	• Trace about the Pali and prakit language, literature and Grammar • Explain about the different type of characteristics i.e. pali, prakrit, aprabhamsa and abahatta
	ASM (M) 505	Literary Criticism	• Trace the history of literary criticism • Explain the different type of literary theory i.e. classical, romanticism, modernism, postmodernism, structuralism, • Illustrate the theory of Indian criticism
	ASM (M) 506	Concept of Language	• Explain the theory of Language • Justify the different type of language theory and its important • Describe the significant of language
Sixth Semester	ASM (M) 601	Modern Assamese Drama	• Trace the history of modern Assamese Drama • Explain about different type of modern Assamese Drama

			• Illustrate about the future of modern Assamese Drama • Draw an outline traditional and modern Assamese Drama
	ASM (M) 602	Modern Assamese Prose Literature	• Trace the history of Assamese prose • Reconstruct the modern Assamese prose literature • Explain the future of modern Assamese prose and how it is different from traditional Assamese prose
	ASM (M) 603	Modern Indian Literature	• Illustrate the history of modern Indian Literature • Explain about the different type of Indian modern literature • Draw a outline about Indian Literature • Compare the Assamese Literature in Indian context
	ASM (M) 604	Assamese Short Story and Novel	• Illustrate history of Assamese short stories and novel • Trace the development of major trend of Assamese short stories and novel. • Describe the emotional effect of reading a few significant Assamese short stories and novel • Explain the influence from western short stories and Novels in Assamese Short stories and novels.
	ASM (M) 605	Chanda and Alangkara	• Trace the history of Indian Chanda and Akangkara in literature • Explain the different type of Chanda and Alangkara in Indian perspective. • Categories of Chanda and Alangkara
	ASM (M) 606	Introduction of Linguistic	• Trace the different kind of linguistic • Discuss about phonology, morphology, syntax, semantics • Explain abut dialectology and

Programme-Modern Indian Language(MIL), Assamese

First Semester (MIL)	ASM (E) 103	Assamese Poetry	• Trace the development of Assamese poetry • Explain the characterization of ancient Assamese poetry • Discuss the trend of romantic and modern poetry through selected poem
Second Semester MIL (Modern Indian Language, Assamese)	ASM (E) 203	Assamese Prose	• Trace about history of Assamese Prose • Draw a outline about Assamese prose
Third Semester MIL (Modern Indian Language, Assamese)	ASM (E) 308	Assamese Drama	• Trace the history of Assamese Drama • Explain about different type of Assamese Drama • Illustrate about the future of Assamese Drama • Draw an outline traditional and modern Assamese Drama
Fourth Semester MIL (Modern Indian Language, Assamese)	ASM (E) 408	Assamese Short Story and Novel	• Illustrate history of Assamese short stories and novel • Trace the development of major trend of Assamese short stories and novel. • Describe the emotional effect of reading a few significant Assamese short stories and novel • Explain the influence from western short stories and Novels in Assamese Short stories and novels.
Programme ---Elective Assamese(ASL)			
First Semester	ASM (E) 101	History of Assamese Literature (from starting to Sankardeva era) & Script	• Trace the history and heritage of Assamese Literature • Trace the development of Assamese script
Second Semester (Elective Assamese)	ASM (E) 201	Assamese Language	• Trace the history of Assamese Language and its development • Explain about its original roots

Third Semester (Elective Assamese)	ASM (E) 304	History of Assamese Literature (from Post Sankardeva to Abahan era)	• Categories of Assamese history from post Sankardeva to Abahon era • Emphasied about the development and trend of Assamese Literature
Fourth Semester (Elective Assamese)	ASM (E) 403	Assamese Grammar	• Trace the Assamese Grammar To know about the history of Assamese Grammar • Categories of Grammar
Fifth Semester	ASM (E) 503	Assamese Poetry	• Trace the development of Assamese poetry • Explain the characterization of ancient Assamese poetry • Discuss the trend of romantic and modern poetry through selected poem
	ASM (E) 504	Assamese Drama	• Trace the history of Assamese Drama • Explain about different type of Assamese Drama • Illustrate about the future of Assamese Drama • Draw an outline traditional and modern Assamese Drama
Sixth Semester	ASM (E) 603	Assamese Prose (Selected)	• Trace about history of Assamese Prose • Draw a outline about Assamese prose

Programme:BA GENERAL ENGLISH:

The aim of this course is to provide the student an opportunity to read and respond to representations issues in contemporary life and culture in the English Language. The selection of texts is aimed to present themes and topics that are stimulating and informative. It also enables the students to develop grammatical skills.

SEMESTER	COURSECODE	PAPER'S NAME	COURSE OUTCOME

I	ENG (G)	Poetry	• Able to critically appreciate the poems which reflect the socio-cultural and political interest of theperiod • Able o familiarize with the major poet like Jayanta Mahapatra and hisunique contribution to Indian English literature • Able to familiarize with major writers from different nations like Wole Soyinka from Nigeria, SezmusHeany from Ireand, Lorca from Spain and the distinguished significance of their writings • Able to have a good overview of grammatical patterns like changingvoice, narrations, tag questions, useof determiners etc
	ENG(G)	Prose	• Able to appreciate the role of Gandhi in the freedom struggle in"The Swadeshi Movement". • Able to interpret ideas of colonialism with reference toGeorge Orwell. • Able to familiarise with Buddhistmythological stories like "Angulimala" and "Running Water". • Able to understand ideas ofnationalism. • Able to understand ideas aboutcolonialism in "Shooting an Elephant". • Able to situate the question of identity and nationalism from different perspectives by reading"Naipaul's India and Mine"

2	ENG	Poetry	• Able to critically appreciate the poems which reflect the socio-cultural and political interest of the period • Able o familiarize with the major poet like Jayanta Mahapatra and his unique contribution to Indian English literature • Able to familiarize with major writers from different nations like Wole Soyinka from Nigeria, Sezmus Heany from Ireand, Lorca from Spain and the distinguished significance of their writings • Able to have a good overview of grammatical patterns like changing voice, narrations, tag questions, use of determiners etc

ENGLISH (MAJOR)/Programme Specific Outcome:

The new BA English Syllabus forms the innovative and expansive thrust of the previous one and is designed to prepare students to understand and use the English language effectively, build vocabulary and introduce them to current ideas and issues as represented in some of the best examples of English writing.

Specific outcome of English major syllabus prescribed by Gauhati University may be cited below:

- The Indian and other literature like European, British etc. provide the students t h e a d e q u a t e p l a t f o r m to understand various types of literature and culture.
- The Classical Literature provides a broader view of the l i t er a t u r e s of the world, and the possibility of cultural exchange.
- The modern English literature focuses on the latest developments in the field of literature from around the world.
- The texts are cortex in different socio-cultural and political events and movements. The multidimensional knowledge of the subject contained in these texts has a great importance in today's society.
- The syllabus offers a wide variety of optional papers enabling the learners come to know the interrelation of life with literature.
- The conceptions of the writers contains in the compositions of Classical Literature, American and African Literature help the learners to explore more and more new ideas and motivate them to undertake a comparative study.

SEMESTER	COURSE CODE	PAPER'S NAME	COURSE OUTCOME
I	ENG(M)1.1	The Social and Literary Context: Medieval and Renaissance	• Able to have an overview of thedevelopment of literature • Able to focus on literary traditionstrough a broad socio-historical perspective • Able to relate the circumstancesthat influenced and shaped the process of literary tradition • Able to acquaint with the contextof the English literary tradition

	1.2	Medieval and Renaissance: Poetry and Plays	• Able to critically appreciate thepoems in the literary context • Able to relate the genre of dramas in the historical and literary contextand political context • Able to examine and interpret theElizabethan sonnets
II	ENG (M) 2.1	The social and the literary context: Restoration to the Romantic Age	• Able to familiarise with the contexts of the English literarytradition • Able to relate the entire period from the Restoration of the Charles II and the re-opening of the theatres in 1660 t the Age of Romanticism • Able to understand the circumstances that influenced,shaped and contributed to theprocess of literary tradition

SEMESTER	COURSE CODE	PAPER'S NAME	COURSE OUTCOME
	2.2	Restoration to Romanticism: English Poetry, Drama and Plays	• Able to interpret the literary texts that reflect the socio-cultural and political interests f the period • Able to examine the ways in which literary texts take part in and produced by urgent issues of a time • Able to situate and relate the literary productions in the historical contexts
III	**3.1**	The Social and Literary Context: The Victorian World	• Able to familiarize the students with the literary traditions of the Victorian Age • Able to examine the novels in the Victorian context • Able to distinguish the shifts that characterize the Victorian world

	3.2	Victorian Poetry and fiction	• Able to understand the characteristics of the Victorian period. • Able to comprehend the literary forms • Able to familiarize with dramatic monologues, love poems and pre Raphaelite movements.
IV	**4.1**	The Social and Literary Context: Modernism and after	• Able to understand the processes of literary production from 20th century to the present • Able to realize how World War I affected the literary works produced by the Modernist writers • Able to understand the complex relationship between society and individuals as portrayed in the Modernist texts

	4.2	English Poetry and Fiction: Modernism and After	• Able to acquaint themselves with modern and Postmodern eras • Able to have an overview of important trends and critical shifts of the Postmodern literary world • Able to relate and interpret the impact of war in poetry
V	**5.1**	Modern Drama I	• Able to familiarize with 20th century European and English drama • Able to understand how by the turn of the century, the European avant-garde had completely altered the theatre • Able to familiarize with stylistic/technical innovations and thematic experimentation exercised in 20th century theatrical world
	5.2	Modern Drama II	• Able to understand the impact of contemporary philosophy, ideas and art movements like existentialism, expressionism, impressionism, Marxism and the Absurd reverberates in modern drama • Students can have an overview of the revival of poetic drama

	5.3	The Essay in English: Addison to Dickens	• Able to examine the emergence of the periodical essay in the 18th century • Able to relate the essays in the wider political, social and cultural context • Able to comprehend a large number of periodicals which provided a forum for the articulation of views on a variety of topics
	5.4	The Essays in English: The Twentieth Century	• Able to acquaint themselves with the developments in the genre of essay in the 20th century • Able to relate the essays against the intellectual and socio-cultural background • Able to understand the way the form of essay was used as vehicle by the authors for representing personal experiences and contemporary issues

V	**5.5**	Life-writing, Biographies, Memoirs and Letters	• Able to interpret life-writing which provides insights into universal human nature • Able to appreciate the process of narrativization as depicted in life writings • Able accommodate the importance of memory, recollection and mode of representation in life writings
	5.6	Women's Writings	• Able to create an awareness about women's lives and their representation • Able to examine how women's texts pay attention to the historical and political conditions of their times • Able to look at the way a woman writer participates in the question of identity and selfhood
VI	6.1	Literary Criticism	• Able to familiarize with the key ideas of Western literary criticism from Graeco-Roman antiquity to the modern period • Able to comprehend various orientations like neo-classical, Romantic and Victorian criticism • Able to study key concepts associated with the names of significant thinkers

	6.2	Twentieth Century Criticism and Theory	• Able to familiarize with ideas and concepts of 20th century criticism • Able to understand the ideas associated with movements like structuralism, post structuralism, psychoanalytical criticism, feminism, new historicism and postcolonialism • Able to have a critical overview of literary criticism and theory
	6.3	Nature	• Able to critically analyse literary texts through an earth-centred approach • Able to interpret language and literature as manifestations of culture by interconnection between nature and culture • Able to understand the concept of eco-feminism
	6.4	Western Mythology	• Able to study classical and Judaeo-Christian myth • Able to analyse the presentation of myths in a variety of literary material like poetry, drama and fiction • Able to understand the literary significance of western myths

VI	6.5	Indian English Literature	• Able to understand the distinctive literature produced in India during the pre-independence and post-independence period • Able to familiarize with the question of women and nationalism • Able to have a nationalistic awareness by reading Indian English literary works
	6.6	Indian Poetry, Fiction and Drama	• Able to familiarize with translations from regional language which are deeply embedded into the classical dramatic traditions • Able to identify women's voices in Indian poetry • Able to interpret the Indian English texts in the light of the historical, cultural and political circumstances

Programme : Arabic General

SEMESTER	**COURSE CODE**	**PAPER'S NAME**	**COURSE OUTCOME**
1st Semester	ARB(G)1.1	Arabic Prose & Poetry, History of Islam & Grammar-I	• Able to trace the development of Arabic Prose & Poetry and Grammar (Syntax). • Able to understand the history of Pre-Islamic Period.
2nd Semester	2.1	Arabic Prose & Poetry, History of Islam & Grammar-II	• Able to deal with simple Arabic Prose & Poetry and Grammar (Etymology). • Able to understand the political history of Islam during Islamic Period.

3rd Semester	3.1	Arabic Prose & Poetry, History of Islam & Grammar-III	• Able to trace the development of Arabic Prose & Poetry During Pre-Islamic period and Grammar (Syntax & Etymology). • Able to understand the political history of Islam during Umayyad Period.
4th Semester	4.1	Arabic Prose-I, History of Islam & Grammar.	• Able to trace the development of Arabic Prose during Abbasid Period and Grammar (Syntax). • Able to understand the political history of Islam during Abbasid Period.
	4.2	Arabic prose-II, Literary History of the Arabs (Pre-Islamic Period), Grammar	• Able to trace the growth and developmentof Arabic literature during Pre-Islamic Period and Grammar (Syntax & Etymology).
5th Semester	5.1	Arabic Prose - I (Medieval Period)	• Able to understand the knowledge of Quran, Hadith during medieval period
	5.2	Arabic Poetry - I (Pre-Islamic & Early Islam)	• Able to gain the knowledge of classical Arabic poetry during the pre Islamic and early Islamic period
6th Semester	6.1	Indo-Arabic Literature	• Able to gain some knowledge of Indian Arabic writers and their contributions to the development of Indo-Arabic literature
	6.2	Modern Arabic Poetry	• Able to gain the knowledge of Mahjar literature

	6.3	Arabic Prose - II (Modern Period)	• Able to gain some knowledge on some Arabic short stories

Programme : Arabic Major

SEMESTER	**COURSE CODE**	**PAPER'S NAME**	**COURSE OUTCOME**
1st Semester	ARB(M)1.1	Arabic Prose-I & Grammar (Etymology)	• Able understand some basic Arabic conversations, short stories • Able to gain some basic knowledge of grammar.
	1.2	Arabic Poetry-I, History of Islam & Grammar (syntax)	• Able to understand some simple Arabic Poetry and some basic knowledge of grammar in the field of syntax. • Able to gain some primary knowledge of Islamic history.
2nd Semester	2.1	Arabic Prose-II & Grammar (Etymology)	• Able to understand some Arabic prose literature. • Able to understand some Arabic grammar.
	2.2	Arabic Poetry-II, History of Islam & Grammar (syntax) .	• Able to trace some knowledge of Arabic Prose of several periods and Grammar (Syntax). • Able to understand the political history of Islam (Khulafa-e-Rashideen).

3rd Semester	3.1	Arabic prose-III, Grammar (Etymology)	• Able to be enlightened with the knowledge of Quran and Hadith literature • Able to use Arabic grammar (etymology) and know characteristics of abwabs
	3.2	Arabic Poetry-III, History of Islam & Grammar (syntax)	• Able to gain the knowledge of classical Arabic poetry • Able to understand d the Political history of Islam during Ummayad period
4th Semester	4.1	Arabic Prose-IV, History of Islam & Grammar (Etymology)	• Able to understand the knowledge of modern Arabic prose literature • Able to gain some knowledge of political history of Islam during Abbasid period • Able to gain the knowledge of grammar in Thulathi Mazeed fih.
	4.2	Arabic Prose-IV, Literary History of Arabs (pre- Islamic Period) & Grammar (Syntax)	• Able to gain knowledge of Arabic literature during pre-Islamic period • Able to use syntax
5th Semester	5.1	Arabic Prose	• Able to understand the knowledge of Quran, Hadith during medieval period
	5.2	Arabic Poetry	• Able to gain the knowledge of classical Arabic poetry during the pre Islamic and Abbasid period
	5.3	Modern Arabic Poetry	• Able to gain the knowledge of History (pioneers) of modern Arabic poetry and their poems

	5.4	Rhetoric, Grammar & Translation.	• Able to use the knowledge of rhetoric, grammar and method of translation and its application
	5.5	Literary History of Arabs & Semitic Language	• Able to gain some knowledge of history of Arabic literature and history of Semitic language
	5.6	Functional Arabic	• Able to use Arabic language and grammar
6th Semester	6.1	Indo-Arabic Literature	• Able to gain some knowledge of Indian Arabic writers and their contributions to the development of Indo-Arabic literature
	6.2	Modern Arabic Poetry	• Able to gain the knowledge of Mahjar literature and about the romanticism
	6.3	Modern Arabic Prose	• Able to gain some knowledge on some Arabic short stories
	6.4	Literary History of Arabs.	• Able to gain knowledge on the pioneers of renaissance and their contributions to the development of modern Arabic literature
	6.5	Functional Arabic	• Able to use Arabic language and grammar
	6.6	Dissertation	• Able to gain some knowledge on various aspects of modern Arabic literature

Programme: Education (Major)

Specific outcome of Education major syllabus prescribed by Gauhati University may be cited below:

1. To understand the scientific foundational theories and principles of education.
2. To enable the students to understand the relation between education and psychology and different methods
of educational psychology.
3. To acquaint the students with the development of education system in ancient, medieval, colonial and post-colonial
period in India along with Assam.
4. To acquaint the students with education as a social process and how it can be understand from the social perspective.
5. To acquaint the learner with the emerging issues in education like different literacy programmes, women empowerment,Human rights, globalization, vocationalization of secondary education.
6. To help the students to acquire knowledge of the concept of measurement and evaluation in education and they will understand the different types of educational tests and their uses.
7. To enable the students to understand the concept and scope and objectives of Educational Technology like teaching technology, behavioral technology and instructional technology.
8. To enable the students to understand the concept, scope and importance of environmental education.
9. To acquire knowledge about the three major philosophies of education — Idealism, Naturalism and Pragmatism and
to familarise with the Indian schools of philosophical thought — Vedic, Buddhist and Islamic thought.
10. To acquaint the students with the teaching learning process, the principles, maxims fundamental of teaching.
11. To enable the students to understand the basic concepts related to development psychology.
12. To enable the students to understand the concept of continuing education and Distance education and its relevance to the changing society.
13. To help the students to understand the meaning and importance of special education on persons with disabilities, education provisions and support services of special children.
14. To enable the students to understand the basic concepts of management, organization and administration

.

SEMESTER	COURSE CODE	PAPER'S NAME	COURSE OUTCOME
I	EDU(M)	1.01 - Foundation of Educational Theories and Principles	➢ Students will interpret the scientific concept and sound principles of education.

			➢ Students will justify the concept, nature and scope of education. ➢ Students will be able to reproduce about different aims of education. ➢ Students will be able to recall or define the general concept of discipline and freedom.
		1.02 - Educational Psychology	➢ Students will be able to identify the relation between education and psychology and different methods of educational psychology ➢ Students will reproduce about the concept of personality, type and trait theories ➢ Students will judge the meaning of intelligence nature and different theories. ➢ Students will be contrast the nature of creative talent and processes and of creative individuals and the implications of identifying and nurturing such talent
II	EDU(M)	2.01 - Development of Education in India	➢ Students will be able to recognize the ancient and medieval system of education in India. ➢ Students will be able to justify the development of education in Assam. ➢ Students will be able to derive the development of education in India during the British period. ➢ Students will be able understand the importance of commissions of education. ➢ Students will be able to acquire brief knowledge about the growth of national

			development.
		2.02 - Sociological Foundation of Education	➢ Students will be able to acquaint with education as a social process. ➢ Students will be able to justify the concept of education from the social perspectives. ➢ Students will understand education as a determinant of social change and development. ➢ Students will be able to contrast social habits and attitudes of the students and to make them social adjustment.
III	EDU(M)	3.01 - Emerging issues and Education	➢ Students will be able to acquaint with the emerging issues in education. ➢ Students will be able to develop awareness and understanding about different literary programmes, women empowerment, human rights, globalization, vocationalization of secondary education. ➢ Students will acquaint about need and importance of national integration and international understanding and the role of education in promoting them. ➢ The students will be able to attain knowledge on life skill education , its meaning and importance.
		3.02 - Measurement and Evaluation in Education	➢ Students will be acquainted with concept of measurement and evaluation in education ➢ Students will be able to

			identify different educational tests and their use ➢ Students will be able to acquaint with the characteristics of a good measuring instrument and the procedure of constructing educational and psychological tests. ➢ Students will be able to know the differences between intelligence test, personality test, aptitude, interest and attitude test and educational achievement test. ➢ Students will be able to justify the new trends in evaluation process.
IV	EDU(M)	4.01-Educational Technology	➢ Students will be able to understand the concept and scope and objectives of Educational Technology. ➢ The students will be able to recognize about the teaching technology, behavioral technology and instructional technology. ➢ The students will be able to justify the communication process, teaching aids, system approach and use of computer and internet in educational technology. ➢ Students will able to acquaint with innovations in education through Educational Technology, Team teaching, E-Learning and E-Library
		4.02-Environmental Education and population Education	➢ Students will be able to justify the concept, scope and importance of environmental education. ➢ Students will be able to understand the programmes

			of environmental education at different levels of education. ➢ Students will be able to manipulate about the awareness of environmental stressors and knowledge on disaster management education.
V	EDU(M)	5.01-Philosophy of Education	➢ The students will be able to create an understanding about philosophy and education ➢ Students will able to acquire knowledge about Naturalism. ➢ Students will be able to generate knowledge about idealism. ➢ Students will justify the importance of pragmatism. ➢ Students will be able to justify the need of democracy in India.
		5.02-Educational thinkers—Oriental and Occidental	➢ Students will be able to understand the great educational thinkers like Rousseau ,John Dewey and John Henrich Pestalozzi. ➢ Students will be able to understand the philosophy of Mahatma Gandhi,Swami Vivekananda and Rabindranath Tagore.
		5.03-teacher Education Major Course	➢ The students will learn about policies and practices and quality assurance in Teacher Education along with the needs and importance of in-service training programmes. ➢ Students will learn about skilled based and competency based teacher education. ➢ Students will learn about professional ethics and

			accountability of teacher. ➢ Students will be able to acquaint the learn with different organizations involved in teacher education.
		5.04 - Teaching –Learning Method and Pedagogy	➢ Students will be able to apply the knowledge to find out the solution for real life problems. ➢ Students will able to develop an understanding of the various methods and devices of teaching. ➢ Students will be able to understand levels ,strategies and models of teaching. ➢ Students will be able to produce a positive attitude towards the teaching profession
		5.05 - Statistics in Education	➢ Students will be able to recognize different statistics in education and measures of Central Tendency. ➢ Students will be able to explain different presentation of data ➢ Students will be able to apply the knowledge in research ➢ Students will be able to know detailed knowledge about descriptive statistics.
		5.06 - Practical Paper	➢ Students will understand the concept of experimental psychology. ➢ Students will be able to compare various methods of conducting different psychological experiments and tests. ➢ Students will be able to explain the importance of scientific attitude in the modern world.

VI	EDU(M)	6.01 - Developmental Psychology	➢ Students will be able to learn the basic concepts relating to development. ➢ Students will be able to understand the developmental aspects of during the infancy and childhood ➢ Students will be able to understand the developmental aspects of adolescence, importance of adolescence period and problems associated with the stage.
	EDU(M)	6.02- Continuing Education and Distance Education	Students will be able to create an understanding about the concept of continuing education and its relevance to the changing society. ➢ Students will be acquainted with the methods and techniques of continuing education. ➢ Will be able to apply methods and techniques of continuing education ➢ Students will understand the development of Adult Education in India, kinds of Adult Education Programme in India and the major problems confronting adult education. ➢ Will be able to create an understanding about the meaning,characteristics,merits and demerits of Distance Education

	EDU(M)	6.03-Special Education	➢ Students will be able to understand the meaning and importance of special education. ➢ Students will be able to be acquainted with different governmental policies and legislations regarding persons with disabilities. ➢ Will be able to familiarize the students with different types of special children with their behavioural characteristics. ➢ Will be able to compare different types of special children with their beha-vioural characteristics.
	EDU(M)	6.04-Guidance and Counselling	➢ Students will be able to understand the concept, nature, scope, need and importance of guidance. ➢ Students will be able to understand the meaning, purpose and functions of different types of guidance programme and their organization. ➢ Students will be able to understand the meaning,nature,objectives,need and importance, types, steps and techniques to counselling. ➢ Students will be able to understand the relationship of guidance and counseling,their problems and ways for improvement.

	EDU(M)	6.05-Educational Management and Administration	➢ Students will be able to understand the basic concepts of management, organization and administration. ➢ Students will be able to gain knowledge on Types, Principles and Functions of educational Management. ➢ Students will be able to tell about educational supervision ,institutional planning and educational administrative structure of India in general and Assam in particular.
	EDU(M)	6.06 Project Paper	➢ Students will be able to prepare a project in order to understand research methodology. ➢ Students will be able to gain practical knowledge in undertaking a research study.

Programme : Education (General)

SEMESTER	**COURSE CODE**	**PAPER'S NAME**	**COURSE OUTCOME**
I	EDU(G)	1.01 - Foundation of Educational Theories and Principles	➢ Students will be able to recognize the scientific concept and sound principles of education. ➢ Students will recall the concept, nature and scope of education. ➢ Students will be able to justify different aims of education. ➢ Students will be familiarized with different dimensions of education such as learner, the teacher and the

			curriculum. ➢ Students will be able to generalize the different dimensions of education such as learner, the teacher and the curriculum. ➢ Students will be able to describe the latest trends of education particularly value education
II	EDU(G)	2.01-Educational Psychology	➢ Students will be able to identify the relation between education and psychology and different methods of educational psychology. ➢ Students will justify the concept and ideas of learning process, memory, attention, instinct and emotion ➢ Students will reproduce about the concept of personality, type and trait theories ➢ Students will judge the meaning of intelligence nature and different theories
III	EDU(G)	3.01-Development of Education in India	➢ Students will be able to recognize the ancient and medieval system of education in India. ➢ Students will be able to justify the development of education in Assam. ➢ Students will be able to derive the development of education in India during the British period ➢ Students will be able to underline the development of education in India during post independence period. ➢ Students will indicate about the importance of commissions of education. ➢ Students will state the

			constitutional provision of Indian education. ➢ Students will be able to measure the growth of national development.
IV	EDU(G)	4.01-Sociological Foundation of Education	➢ Students will recognize the education as a social process. ➢ Students will be able to justify the concept of education from the social perspectives ➢ Students will be able to justify the education as a determinant of social change and development. ➢ Students will be able to contrast social habits and attitudes of the students and to make them social adjustment.
V	EDU(G)	5.01 - Emerging Issues and education	➢ The learner will be able to understand about emerging issues in education. ➢ Students will able to understand about different literacy programmes ,women empowerment, Human rights, globalization ,vocationalization of secondary education. ➢ Students will understand about students indiscipline-its causes and remedies. ➢ Students will evaluate the need and importance of national integration and International understanding and the role of education in promoting them
		5.02 - Educational Measurement and Educational Statistics	➢ Students will be able to acquire knowledge of the concept of measurement and evaluation in education. ➢ Students will compare different types of educational

			tests and their uses. ➢ Students will evaluate the characteristics of a good measuring instrument and the procedure of constructing educational and psychological tests. ➢ Students will be able to apply statistics in Education
VI	EDU(G)	6.01-Educational technology	➢ Students will understand concept and scope and objectives of Educational Technology. ➢ Students will interpret about teaching technology, behavioral technology and instructional technology. ➢ Students will elaborate about communication process ,teaching aids ,system approach and use of computer and internet in educational technology.
		6.02-Environmental Education and population Education	➢ Students will be able to justify the concept, scope and importance of environmental education. ➢ Students will be able to underline the programmes of environmental education at different levels of education. ➢ Students will be able to manipulate about the awareness of environmental stressors and knowledge on disaster management education.

Programe: ECONOMICS

PROGRAMME OUTCOMES

The principal objectives of the Economics programme are as follows:

The primary objective of the subject economics is to develop an understanding of how individuals, organizations and societies meet their material needs. The courses present in economics at a level that is useful for understanding a wide range of social and policy issues. The core theory courses provide a more rigorous grounding in the tools used in analyzing individual choice, the functioning of markets, and the behavior of output, employment, and inflation. The statistics course familiarizes students with the methods used to analyze economic data, and equips them with the tools necessary to critique and conduct empirical research. Some specific objectives are –

1. It aims to provide students an information base as well as well-resourced learning environment in economics.

2. It attempts to provide structured curricular which support the academic development of students and to acquire knowhow on methodology of economics as a branch of social sciences.

3. It aims to provide the students with the opportunity to pursue courses that emphasizes quantitative and theoretical aspects of economics.

4. The course trying to help students with the opportunity to focus on applied economics and policy issuesin economics with the understanding of various quantitative and qualitative economic models. 5. To provide programmes that allows the students to choose from a wide range of economic specialization and familiarize with different branches of economics and

6. To motivate students of economics for conducting socio-economic researches using mathematical and statistical tools.

Course Outcomes (Major Course)			
Semester	**Course Code**	**Title of the Paper**	**Learning Outcome of the course**
Sem.-I	M 101`	Microeconomics I	This course provides the basic idea on economic theory. The objective of the course is to make students able to analyze consumer and producer behaviour and decisions in the market. The course helps to understand firm's production processes and decisions thoroughly. The course provides knowledge to solve the basic microeconomic problems.
	M 102	Macroeconomics I	This course provides the students to the basicconcepts of macroeconomic variables. This course attempts to helps to

			Understand clearly about macroeconomic concepts and theories so that the students can apply theoretical knowledge to evaluate policy measures. This course focuses on the preliminary concepts associated with the determination and measurement of aggregate macroeconomic variable like GNP, GDP, Inflation, national income, Per capita income, Unemployment, savings, investment, consumption etc.
Sem.-II	M 201	Microeconomics II	The course is formulated to expose the students about different market structures. The course focuses how equilibrium prices of final products are determined in different market. This paper also highlighted determination of prices of factors of production.
	M 202	Macroeconomics II	This course provides students to identify macroeconomic policy of decisions in diverse economic entities. The course provides understanding about macroeconomic policy formulations. This course helps tounderstand the happening of the macroeconomic events like business cycle, natural rate of unemployment, inflation etc.
Sem.-III	**M 301**	Elementary Mathematics for Economics	This course is designed for the students with basic mathematical tools for analyzing economic theory in practice.
	M 302	The Monetary System	This course provides basic idea on theory and functioning of the monetary policy in India.
Sem.-IV	M 401	Mathematical Applications in Economics	This paper gives application on how to apply mathematical tool in economic theory to solve economic problems in practice. Linear programming, game theory etc. are taught in this paper.
	M 402	Introductions to oDevelopment Economics	The course provides basic concepts and issues of economic growth and development. This paper focuses various issues on sustainable developments and environmental accounting.
Sem.-V	M 501	Elements of Public Finance	This paper provides basic concepts of financial activities (revenue and Expenditure) of the government. Issues related to government collection of revenue, government expenditures, deficits financing etc. are thoroughly discussed.
	M 502 (for Arts	Basic Statistics For Economics	This course starts with some basic concepts and terminology that are fundamental to statistical analysis and inference. It then

	stream)		Focuses on the notion of probability, followed by probability distributions of discrete, continuous random variables, Bayes' theorem, sample and statistics and parameters.
	M 502 (for Science stream)	Elementary Econometrics	There are no science students in the college for taking this paper. Students opted for the previous paper on Basic Statistics for Economics.
	M 503	Introduction to Environmental Economics	The course tries to give an idea of economy-environment linkages and describes the nature and scope of environmental economics. This paper attempts to highlight sustainable development and teaches how to acquire skills ofsolving environmental problems.
	M 504	International Trade: Theory And Policy	The course attempts to teach International economic issues and role of international institutions in tackling them. The aim is to study fundamental theories in International Economics like Ricardian comparative Advantage theory, H-O theory, Vernon Product cycle model, Technological gap model, terms of trade, tariff etc.
	M 505	History of Economic Thought I	This course describes the history of economic thought and analyses the mercantilism, physiocracy, etc. The development process of economic thinking during classical period and socialists' periods are also discussed.
	M 506	Development Policy And The Indian Economy	The objective of the course is to present basic features of Indian economy. The conceptual and measurement issues of poverty, inequality and unemployment are analyzed in Indian situation. The role of Agriculture in economic development of the country is also discussed. This course throws light on the role of Industries in the development process of the country.
Sem.-VI	M 601	Public Economics	This course helps to know the different types of taxes in taxation system. The budgetary procedure fiscal policies and system of federal finance are also discussed. The course analyses various issues between centre and state governments.
	M 602 (for Arts stream)	Applied Statistics	The aim of the course is to teach how to apply statistical tools like index numbers, time series analysis and vital statistics in solving the real world problems.
	M 602 (for science stream)	Econometric Methods	The aim of this course is to provide a foundation in applied econometric analysis and develop skills required for empirical research in economics. Topics include problems in Ordinary Least Square (OLS) methods, Lagged models and Dummy variables and Time Series Analysis.
	M 603	Economics of Natural	This is the second module of economic development

		Resources an dSustainable Development	sequence. It begins with the types and characteristics of natural resources. This is followed by the economics of renewable and non-renewable resources. Development-environment trade-off, sustainable development etc. issues are discussed here.
	M 604	Internationa lEconomics	The objective of the course is to provide knowledge on international economics introducing international economics as a distinct branch of economics. The Structure of Balance of Payments (BOPs), its accounting principle, disequilibrium, types and causes of disequilibrium and adjustment mechanism are also discussed. In Foreign Exchange unit, functions of Foreign Exchange Market, determination of Equilibrium Exchange Rate, concepts of Spot and Forward Rates are analysed. This is followed by theforms of economic integration and Customs Union. The objectives and functions of international institutions like IMF, IBRD, WTO are also discussed.
	M 605	History of Economic Thought II	This course is the second part of the History of Economic Thought. Some famous schools of economic thought like Marginalist school, Austrian school, Mathematical school, Neo-classical economics are discussed here. This is followedby the Keynesian Economics and its departure from the Classical School. The next unit is on Indian Economic Thought. The main themes of Kautilya's Arthasashtra; Modern Economic Ideas of Dada Bhai Naoroji, Ranade, Gokhle are discussed in brief. The economic ideas of Mahatma Gandhi on Village, Swadeshi, Khadi, Cottage Industries and place of Machine, Welfare of Labour, Non- violent Economy, Decentralization, Trusteeship, and Sarvodaya are discussed elaborately.
	M 606	Planning f orDevelopment: India and the Northeast	This course gives a thorough understanding on Indian Economic System. The aim of the course is to analyse the policy issues relating to economy of India and to provide broad outline about the status, issues and policies of the Indian economy at the aggregated (macro) as well as sectoral levels. The course will help the students to understand the experiences in the pre as well as post reform years, keeping the colonial experience at the background.

Course Outcomes (General/Elective Course)			
Semester	**Course Code**	**Title of the Paper**	**Learning Outcome of the course**
Sem.-I	E 101	Elementary Microeconomics	The aim of the course is to expose the students to the basic concepts of microeconomic theory. The concept of equilibrium, consumer behaviour, production and cost, product pricing and factor pricing are analysed through the units to be taught here.
Sem.-II	E 201	Introductory Macroeconomics	This course aims to introduce the students to the basic concepts of Macroeconomics. Macroeconomics deals with the aggregate economy. This course discusses the preliminary concepts associated with the determination and measurement of aggregate macroeconomic variable like savings, investment, GDP, inflation, and employment.
Sem.-III	E 303	Money, Banking and Finance	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. It also discusses interest rates, monetary management and instruments of monetary control. Financial and banking sector reforms and monetary policy with special reference to Underdeveloped Countries (UDC's) like India are also covered.
Sem.-IV	E 403	Indian Economy with Issues of North-East	This course examines sector-specific polices and their impact in shaping trends in key economic indicators in India and especially for Assam in the North east India. It highlights major policy debates and evaluates the Indian empirical evidence before and after reforms.
Sem.-V	E 503	Public Finance	This course provides a basic knowledge on government finances with special reference to India. Public goods, private goods, local finance, Public revenue, Public Expenditure, Public Debts, fiscal deficits, Fiscal Policy, Budgets etc. are discussed thoroughly.
	E 504	Introductionsto Growth and Development Economics	In this course aggregate models of economic growth and cross-national comparisons of the growth experience that can help evaluate these models.
Sem.-VI	E 603	International Economics	This course is to provide preliminary knowledge on international economics introducing international economics as a distinct branch of economics and different concepts of Terms of Trade, Balance of Payments, Foreign Exchange Rates are discussed here.
	E 604	Planning and Development in India	this course analyses features of Indian economy and reviews major trends in economic indicators and policy debates in India in the post- Independence period

COURSE OBJECTIVE AND OUTCOME (UG COURSE)

DEPARTMENT OF PHILOSOPHY

KAMRUP COLLEGE, CHAMATA

1. OBJECTIVE OF THE COURSE:

a) MAJOR COURSE:

i. Students will learn about both Indian and Western philosophical tradition and also about the contributions of the philosophers.
ii. This will helpful to the students in order to create an environment full of philosophical values, which is a basis of Indian culture and tradition..
iii. It will help the students to develop a critical and analytic outlook.
iv. Would be helpful in the holistic development of the students by providing epistemic, spiritual and aesthetic values.
v. Would be helpful for the students in acquiring ethical norms and values and application of them in practical aspect too.

b) GENERAL COURSE:

i. General course would be helpful in developing a critical and logical way of thinking and reasoning and enhancing thinking ability.
ii. Would be helpful for the students in acquiring ethical norms and values and application of them in practical aspect too.
iii. It will help in understanding a number of issues related to human life like social, political, spiritual, aesthetic, educational etc.
iv. I t is helpful in understanding contemporary issues and finding solutions of them in a systematic manner.
v. Study of logic and ethics would help students in their holistic development.

Programme: PHILOSOPHY (MAJOR)

SEMESTER	PAPER's NAME	COURSE OUTCOME
1ST SEM	P.1.1 Logic 1	1. Would learn about the nature of logic and Argument, Argument form. 2. Would gain proper understanding of logical constant, truth-function. 3. Would learn Truth table method. 4. Would learn about proposition and modern classification of proposition. 5. Would understand set and operation on sets.
	P.1.2 Epistemology and Metaphysics I	1. Would learn shorter truth table method 2. Would learn formal proof of validity. 3. Understand categorical syllogism 4. Would learn Venn diagram technique of testing syllogism. 5. Would learn about Quantification.
2nd SEM	P.2.1 LOGIC II	1. Would learn shorter truth table method 2. Would learn formal proof of validity. 3. Understand categorical syllogism 4. Would learn Venn diagram technique of testing syllogism. 5. Would learn about Quantification.
	P.2.2 Epistemology and Metaphysics II	1.Would learn theories of truth. 2.Would learn about substance. 3.Understand space time and causality. 4.Would know about freedom and determinism. 5.Would learn about Ayer's rejection of metaphysics.

3rd SEM	P.3.1 Indian Philosophy I	1. Would know about the schools of Indian Philosophy 2. Would have proper understanding of Carvaka Materialism and Epistemology. 3. Would learn about Jaina Philosophy. 4. Would gain knowledge about Buddhism. 5. Would have proper understanding of Pratityasamutpada.
	P.3.2 History of Modern Western Philosophy I	1. Would learn about Descartes's Method and Philosophy. 2. Would have proper knowledge ofSpinoza's Substance 3. Would learn about Spinoza's account of attribute and modes. 4. Would learn about Liebniz's theory of Monad. 5. Would learn about Liebniz's pre established harmony.
4th SEM	P.4.1 Indian Philosophy II	1. Would learn about Nyaya philosophy. 2. Would have proper knowledge of Vaisesika Philosophy 3. Would know Sankhya Philosophy. 4. Would have proper understanding of Yoga Philosophy. 5. Would learn about Sankara's and Ramanuja's philosophy.
	P.4.2 History of Modern Western Philosophy II	1. Would learn about Locke's Empiricism. 2. Would have proper knowledge of Hume's impression and idea. 3. Would learn about Hume's theory of causation 4. Would learn about Kant's Philosophy. 5. Would learn about Kant's twelve categories.

5th SEM	P.5.1 Greek Philosophy II	1. Would learn about Thales's primary stuff. 2. Would have proper knowledge of Pythagoras's theory of number 3. Would learn about Heracleitus's doctrine of flux. 4. Would learn about Eleatic school. 5. Would learn about Democritus's Atomism.
	P.5.2 Contemporary Indian Philosophy I	1. Would learn about Vivekananda's practical Vedanta. 2. Would have proper knowledge of Aurobindo's evolution. 3. Would know the philosophy of Tagore. 4. Would learn about Tagore's humanism. 5. Would learn about Radhakrishnan's philosophy.
	P.5.3 Contemporary Western Philosophy I	1. Would learn about Nature of Analytic philosophy.. 2. Would have proper knowledge of Russell's logical Atomism. 3. Would know about Moore's refutation of Idealism. 4. Would learn about Wittgenstein's philosophy. 5. Would learn about Ryle's refutation of Cartesianism.
	P.5.4 Ethics I	1. Would learn about Morality and Moral philosophy. 2. Would have proper knowledge of fact and value. 3. Would know about Normative ethics. 4. Would learn about Meta ethics and Practical ethics. 5. Would learn about teleological theories of ethics.
	P.5.5 Philosophy of Religion I	1. Would learn about nature and scope of philosophy of religion. 2. Would have proper knowledge Animism, Mana, Fetishism and Magic. 3. Would know about Freud's theory of origin of religion. 4. Would learn about reason and revelation as foundation of religion. 5. Would learn about Faith and Mysticism as a part of religion.
	P.5.6 Social Philosophy I	1. Would learn about nature and of social philosophy. 2. Would have proper knowledge of society and individual. 3. Would know about Terrorism, the concept of globalisation. 4. Would learn about Feminism and its characteristics. 5. Would have proper understanding of Marxism.

6th SEM	P.6.1 Greek Philosophy II	1. Would learn about Greek philosophy. 2. Would have proper knowledge Socrates's virtue. 3. Would know about Plato's philosophy of theory of knowledge and doctrine of Ideas. 4. Would learn about Aritotle's philosophy. 5. Would have proper understanding of Aristotle's concept of causality and matter.
	P.6.2 Contemporary Indian Philosophy II	1. Would learn about Gandhi's philosophy. 2. Would have proper knowledge of Gandhi's concept of God, Truth and Religion. 3. Would know about Non-violence, Sarvodaya and Satyagraha. 4. Would learn about Gandhi's account of Swadeshi and Trusteeship. . 5. Would have proper understanding of Gandhi's view of criticism of Industrialization.
	P.6.3 Contemporary Western Philosophy I	1. Would learn about Existentialism. 2. Would have proper knowledge of Kierkegaard's philosophy. 3. Would know about Nietzsche's account of Nihilism and Superman. 4. Would learn about Husserl's phenomenology. 5. Would have proper understanding of Sartre's concept of essence and existence.
	P.6.4 Ethics II	1. Would learn about Deontological ethics. 2. Would have proper knowledge of Kant's categorical imperative 3. Would know about Nietzsche's account of Moore's indefinability of Good. 4. Would learn about A. J. Ayer's emotivism. 5. Would have proper understanding of Theories of punishment and Law of Karma.

PROGRAMME OBJECTIVE OF HISTORY:

History is important to study because it allows us to understand our past which in turn allows to understand our present. If we want to know how and why our world is the way it is today, we have to look to history for answers. People often say that “history repeats itself”, but if we study the success and facilities of the past, we may, ideally be able to learn from our mistakes and avoid repeating them in thefuture. Studying history can provide us with insight into our cultures with which we might be less familiar, thereby increasing cross-cultural awareness and understanding.

It is important to study history some may learn about past human behavior that is relevant to the intellectual growth and development of an individual.Studying the events of the past give us an understanding of how the world com tobe, not only in your world but around the world including all cultural of people as well as nature. By learning about the causes and effects of events in history, peoplecan learn better ways to deal with conflict among nations and individuals. Studying the history of environmental changes can enhance a healthier lifestyle for mankind, as well as present the extinction of plants and animals, which could destroy our ecosystems. Although human behavior is unpredictable at times, a better understanding through the study of history can provide valuable insight for our future generations.

Course Outcomes

SUB: HISTORY (M)

Semester	Course Code	Paper'sName	Course Outcomes :
1.	Code -101 Paper -I	Introduction to History	(i) The students will be able to acquainted with the meaning of history and the pattern of history writing. (ii) The students will be able to learn how history isrelated to other subjects like economy, Pol. Sc. Philosophy etc. (iii) The students will able o also learn about how thedata for research can be collected. (iv) The students will able to learn about differentauthors who used to write history.
1.	Code -102 Paper -II	History of India (Upto AD300)	(i) The students will be able to will learn about varioustypes of sources available for writing history. (ii) The students will be able to learn about Vedic ageas will as its culture. (iii) The will also be acquainted with New Religiousdevelopments (iv) The students will also learn about foreigninvention like the famous Greeks, Kushan.

Semester	**Course Code**	**Paper's Name**	**Course Outcomes :** **The students are-**
2.	Code-203	History of India (300 AD 1200 AD)	(i) The students are expected to compare the power of Gupta dyelines and their state policy and describe about socio culture and trade relation with different countries of the world. (ii) It also tried to interact cries of different power like Parthiaras haves, Rastrakutas, Cholas it tried to justify why foreign nation had taken place in several times etc.
2.	Paper-204	History of India ancient civilizations of the world.	(i) It tried to define how different civilizations had been evolved like, EGYPT, Mesopotamia, Greece and Rome and China. (ii) It tried to compare different development literature art, philosophy, science and technology. iii)Student are also able to explain trading relation between India & others countries of the world.

Semester	**Course Code**	**Paper's Name**	**Course Outcomes :**
3.	Code-305 Unit-I,	India under Turki-Afghans	(i) The students are able to reconstruct the sources of mediaeval history of India. (ii) They are expected to organized how foundation and consolidation of the Sultanate has taken place. (iii) Thy are also able to illustrate how religion, Bhakti movement and Sufi moment formed, the trade relation, agricultural system and formulated administration of the country.
3.	Paper-306	History of Assam (5^{th} C to 1228)	(i) The students will be able to learn about the ancient dynasties mortise of Assam and Koch Behar. (ii) The students will be also able to learn about the assisting sources which would help them to reconstruct the history of Ancient Assam (iii) The students will also learn about ruined which are present like ancient monuments, temples etc.

Semester	Course Code	Paper's Name	Course Outcomes
4.	407	India under the Mughals	(i) The students will be able to revise about the famous Mughal rulers who had changed course of Indian History. (ii) The students will be also able to learn and know about the relations of Mughal rulers with the native rulers and their consequences. (iii) The students will get on idea about different politics of the Mughal rulers like political, administrative, religious and foreign. (iv) The students will also learn about the real causes of the Mughal downfall.
4.	Course-408	History of Europe.	(i) The students will be able to see how Europe was changed to modern due to Renaissance and different Christian religious movements. (ii) The students will come know about different ancient European Kings and can criticize them. (iii) The students will come a cross the terms like Capitalism, Mercantilism, Imperialism.

Semester	Course Code	Paper's Name	Course Outcomes :
5.	Paper-509	India under the East India Company.	(i) The students will be able to construct the political, social and economic changes of the society during the 19th Century. (ii) The students can compare the ideas and politicies by which the British conquered whole India. (iii) The students will also learn about various demerits of the British Governor General. (iv) The students will be able to trace the courses of various tribal movements and the famous sepay Mutiny.
5.	Course-510	History of Assam (1228-1826)	(i) The students come across different Ahom Rulers and about their Dynasty from the very beginning. (ii) The students will also learn about Mughal invasions and Ashom Tribal Relations.

			(iii) The students will also develop the society economy and religious during the reign of the Ahom.
			(iv) The students will also learn about Moamariya rebellion and Burmese invasion.

Semester	**Course Code**	**Paper's Name**	**Course Outcomes :**
5.	Paper-511	History of Europe (1789-1870)	(i) The students will get a clear picture of all the European states before and after Napoleon Bonaparte. (ii) The students will come to know how modern day Italy and Germany come into insistence. (iii) The students will also come to know about the French Revolution.
5.	Course-512	History of Science and Technology in Pr Colonial India	(i) The students will be able to revise different ages of time like Paleolithic, Mesolithic, Neolithic and its development regarding the use of tools. (ii) The students will come to know about the contributing and discoveries of some Indian scientists like Aryabhatta, Varamihira, Brahma Gupta, Bhaskara

			etc. (iii) The students will also come across different typesof scientific development like textiles, engineering skills, gun power etc.

Semester	**Course Code**	**Paper's Name**	**Course Outcomes :**
5.	Paper-513	History of Great Britain (1485-1820)	(i) The students will se England during the reign of Tudors and stuart rulers. (ii) The students will come across different constitutional development ents during the reign of tudors and stuart rulers. (iii) The students about industrialization and its consequences.
5.	Course-514	History of China (1839-1949)	(i) The students will get a clear picture of how western powers had opened china and created their own share uninfluenced in china. (ii) The students will also able to learn about the opium wars and other commercial treaties with

			foreign powers. (iii) The students will also able to learn about different types of Reform movement and the emergence of Nationalism under Dr. Sun-Yet Sen. (iv) The students will come across how communism started to develop in China.

Semester	**Course Code**	**Paper's Name**	**Course Outcomes :**
6.	Paper-615 =	India under the crown	(i) The students will be able to learn about different types of socio-religious reform movements like Arya Samaj, Brahma Samaj etc. (ii) The students will also be able to learn about the causes for rise of Indian Nationalism. (iii) The students will get an idea about different types of national movements fought under the leadership of Mahatma Gandhi and involvement of women in movements. (iv) The students will learn about administrative

			policies of the British Government.
6.	Course-616 =	History of Assam (1826-1947)	(i) The students will be able to learn how whole Assam was finally annexed by the British Government. (ii) The students will also able to learn about different types of economic development during the British Rule. (iii) The students will also learn how the surrounding hilly places like Manipur, Jaintias, Khasis were annexed by the British.

Semester	**Course Code**	**Paper's Name**	**Course Outcomes :**
6.	Paper-617 =	History of Europe (1861-1945)	(i) The students will get full idea about the scenario of Europe before the out hear of the World War I and World War II and scenario after the Wars. (ii) The students will also be able to learn about the relation of the state and the Church. (iii) The students will also learn about the peace organizations like the League of Nations and the UNO.

			(iv) The students will also know about the term dictatorship and how with its emergence in Germany under Hitler and Italy under Mussolini changed the political relationship of Europe.
6.	Course-618	World Since 1945	(i) The students will learn about Cold War—its meaning and implications in Korea and Vietnam. (ii) The students will learn about activities of the United Nations for maintaining peace. (iii) The students will also learn about Middle Eastern conflicts like Iran, Iraq War, Arab, Irrael Wars, Gulf War. (iv) They will also learn about problems of Africans Countries.

Semester	**Course Code**	**Paper's Name**	**Course Outcomes :**
6.	Paper-619	History of Japan (1853-1941)	(i) The students will learn how Japan was opened by Western powers.

	=		(ii) The students will also known how Japan was develop after the restoration of Meiji. (iii) The students will get an idea about the relation of Japan with China, England, Korea and Russia, (iv) The students will also Korea the condition of Japan between the Two World War.
6.	Course-620	Project	

Course Outcomes

SUB: History (G)

Semester	Course Code	Paper's Name	Course Outcomes :
1.	Course-1.1	Early India upto 120 AD	(i) The students be able to learn about Harappan and Vedic Cultur. (ii) The students will also learn about the growth of states along with Buddhism and Jainism. (iii) The students will learn about famous Maryann

			Dynasty and Alexander's invasion on India. (iv) The students will develop on idea about Gupta Rulers and their after math. (v) Along with these will learn about Harsha vardhan.
2.	Course-2.2	Early History of Assam upto 1228 AD.	(i) The students will develop a clear idea about society economy and religions Assam before the coming of the Ahom. (ii) The students will able to learn about the sources which help them to reconstruct the history of Ancient Assam. (iii) The students will also learn about different other dynasties like the Varmana, Salastambhas and Palas and about their administration.

Semester	**Course Code**	**Paper's Name**	**Course Outcomes :**

3.	Course-3.3	History of India (1206-1757 AD)	(i) The students will learn about the Delhi Sultanates their different dynasties. (ii) The students will also learn about the society and economy of India during the reign of the Sultanates. (iv) The students will also learn about growth of Provincial kingdoms like Vijay Nagar and Bahmini Kingdoms. (v) The students will able to learn how Mughals come to India and how they had expanded their territories. (vi) The students will also able learn about the Mughal administration and the rise of Afghans. (vii) The students will also learn about the growth of Maratha power. (vii) the students will also able to learn about the advice of the Portuguese, Dutch French & English.
4.	Course-4.4	History of Assam (1228-1820 AD)	(i) The students will be able to learn about the Ahoms come to Assam and established their rule along with the emergence of Koch Power and its relation with the Ahom Rulers.

			(ii) The students will be able to learn about, political institutions, economic and society of the Ahom andthe Koches. (iii) The students will also be to study about the Ahom-Mughal conflicts during the reign of Pratap Singh, Jayadhaj Singh, Chakradvaj Singh etc. (iv They will learn about the glory of the Ahom rule and about the courses which led tp their define.

Semester	**Course Code**	**Paper's Name**	**Course Outcomes :**
5.	Course-5.5	History of India (1757-1857 AD)	(i) The students will be able to learn about the society and political condition of India during the 19th Century. (ii) The students will also learn about the Anglo-French War and 1764 Bexar War by Plassey War and British had established their held in India. (iii) The students will be also able to learn about different administrative politics and reforms of the

			British Governor Generals and also about their pros and cons. (iv The students will also learn and the Sepoy Mutiny of 1857.

Semester	**Course Code**	**Paper's Name**	**Course Outcomes :**
5.	Course-5.6	History of Europe (1815-1939)	(i) The students will able to learn about political conditions an background which lead to the occurrence of the First-World War. (ii) The students will also learn about the unification of Italy and Germany and about the concert of Europe. (iii) The students will learn about the first international organization to maintain peace the league of Nations its causes for nation and about its success & failures. (iv) The students will also learn about the factors behind the growth of Fascism and Nazirm in Italy and Germany.

			(v) The students will also learn about the causes of the World War II.

Semester	**Course Code**	**Paper's Name**	**Course Outcomes :**
6.	Course-6.6	History of India (1858-1947)	(i) The students will be able to learn about administrative changes of British after the Revolt of 1857. (ii) The students will also learn about different types of Social religious movement for the reformation of religions well as the society. (iii) The students will also be able to learn about the factors leading to the growth of nationalism among the Indians. (iv) The students will also come to know about different types of freedom movements fought under the leadership of Gandhi.
6.	Course-6.7	Modern Assam (1826-1947 AD)	(i) The students will be able to learn about adminitrativee changes brought by the East India Company in Assam and its annexationirt policy

			regarding Assam, Cachar, Mahipur, Garo Hills etc. (ii) The students will also learn about the Sepoy Mutiny of 1857 in Assam and many anti British uprisings. (iii) They will also learn the factors leading to the growth of nationalism and different freedom monuments.

SUBJECT: POLITICAL SCIENCE (MAJOR)

Program Specific Outcome :

- Versatile nature of political science provides immense scope to the learners in getting degree in different fields- sociology, peace and conflictstudies, public administration, international relation, northeast studies, and women studies.
- The subject gives student both a specialization in a sub field of politicalscience and rigorous research training.
- In partnership with Sociology, Economics, History offer a dual PH.Ddegree in political science.
- Political Science of international relation is rooted the tradition of multidisciplinary studies.
- Versatile nature of political science widens knowledge in different socialperspective.

- Makes aware of rights, duties, responsibilities of citizens and also aboutfunctioning of government system, election process, and diplomatic system to learners.
- Consolidating a tradition of excellence, the ancient, medieval and modernpolitical thought provides immense scope to the learners for their career building.
- Political science is the scientific study of the institutions, forms ofthought and organizations as well as various actors.
- The subject provides wide marketable job opportunity in national and international affairs.
- The study of political science inspires and helps the learners to become better statesmen, political leader, better orator who can write the societyand nation in the right path.
- It facilitates social habits, attitude, and cooperation among the students tomake them socially adjustable.

Programme: Political Science (Major)

Semester	Course Code	Paper's Name	Course Outcome
I	1.1	Political Theory-I	➢ To provide conceptual knowledge onpolitical theory and its approaches aswell as on power, ideology and state. ➢ To familiarize with the basicnormative concept of political theory. ➢ To build up from a conceptual base and relates the ideas to the practical domain where different political ideas have influenced the society at large.
	1.2	Indian Government and Politics	➢ The basic objective objectives of the course are to acquaint the students of political science with the process and dynamics of Indian Politics ➢ To familiarize students with the Constitutional arrangements andprocesses in India.

			➢ To understand historically the advent of colonialism in India and the emergence of the discourse on nationalism as a response to it. The aim is to engage with theoretical explanations of colonialism and nationalism in India at the same time study the social, political and institutional practices that unfolded in that period, gradually paving way towards independence and democracy in India.
II	2.1	Political Theory-II	➢ To provide knowledge on democracy, development, alternative development views on Development viz. Sustainable Development, Human Development etc. multiculturalism and social justice. ➢ To familiarise with the basic normative concept of political theory. ➢ To build up from a conceptual base and relates the ideas to the practical domain where different political ideas have influenced the society at large.

	2.2	Indian Government and Politics	➢ The basic objective objectives of the course are to acquaint the students of political science with the process and dynamics of Indian Politics. ➢ To provide knowledge on contemporary India, relations between centre and states, party system, election system and challenges in national integration. ➢ To familiarize students with the Constitutional arrangements and processes in India.
III	3.1	International Relations-I	➢ To provide conceptual knowledge on international relations, international politics, Balance of power, collectivesecurity, national interest, ideology etc. ➢ To provide knowledge on the causes and consequences of two world warsand cold war. ➢ The paper provides an understanding of evolution and transformation of international relations. From a conceptual background, the paper identifies principal actors and some of the processes that are key to contemporary international relations. ➢ This paper deals with concepts and dimensions of internationalrelations and makes an analysis of different theories highlighting the majordebates and differences within the various theoretical paradigms. The dominant theories of power and different aspects ofbalance of powerare included.
	3.2	Public Administration-I	➢ To understand public administration through scientific theories on administrative system, ➢ To provide knowledge on principles

			and structures of organization, good governance and new public management. ➢ To familiarise students with the fundamentals of Public Administration. It emphasizes on both the organizational and functional aspects of administration and seeks to create an understanding about the accountability of administration. ➢ To provide knowledge to thestudents on comprehensive understanding of contemporary administrative developments.
IV	4.1	International Relations-II	➢ To enrich knowledge on foreign policy, diplomacy, roles of United Nations, global economy from colonial period and impact of globalization in third world countries. ➢ To make students aware of the Euro - centricism of International Relations by highlighting certain specific perspectives from the Global South. ➢ The student is expected to study International Politics and India's Foreign Policy from a pro-active and futuristic perspective.
	4.2	Public Administration-II	➢ The Students will be able to gain knowledge on personal administration,financial administration,development administration and citizen centric administration. ➢ The students will be able to have comprehensive understanding of contemporary administrativedevelopments.
V	5.1	Western Political Thinkers	➢ The paper seeks to provide a critical understanding of the main philosophical themes in Western Political Thinking as represented by select thinkers from the early Greek period to the modern period. It emphasizes on the life and works of the thinkers and links it to the dominant paradigms of the time. ➢ To provide knowledge on classical tradition

			in political theory from Plato to Marx with the view to understand how the great Masters explained and analyzed political events and problems of their time and prescribed solutions. The legacy of the thinkers is explained with the view to establishing the continuity and change within the Western political tradition.
	5.2	Select Constitutions-I	➢ It enriches knowledge about administrative, legislative and judicial system of United Kingdom as well as party system. ➢ It provides knowledge about federal system, National Government, Political Parties of the American Constitution. ➢ It enriches knowledge about executive legislative and administrative system of UK and USA Constitution by making a comparative study between the two. ➢ This paper studies the select Constitutions of the world by adopting a comparative approach. The ideological basis, constitutional and legal provisions, institutional arrangement and their social and economic background are to be explained, analyzed and evaluated critically. The comparative perspective enables the students to understand the differences and similarities between the various constitutional arrangements. ➢ This paper exposes students to the leading model constitutions of the world. The effort is also to cover leading constitutions of major continents viz. USA and UK. These constitutions are to be studied in light of the political processes to gain understanding of the dynamics ➢ of actual politics and policy making in these countries.
	5.3	General Sociology-I	➢ To make student know about basic concepts of society along with the contribution made by various sociologists towards the field of sociology. ➢ Enriches knowledge on Sociology through Scientific methods of Sociology. ➢ Inculcate key concept of Sociology- Family, Society, Community, Social Stratification, Social Class and concept of gender.

	5.4	Contemporary Political Issues	➢ To acquaint students with various issues of political system so that they can have an understanding of those and so that they can contribute towards the solution of some burning problem of the society. ➢ It stresses on issues like Environment Terrorism Human development and human security. ➢ It focuses on issues of Gender Gender Exclusion, Gender Justice, Beijing Declaration 1995 and Gender Budgeting.
	5.5	Political Sociology-I	➢ To make students acquainted with the relation between society and politics. Through this students will be able to learn about different socio political process and dynamics. ➢ To inculcate knowledge about emergence, natures, matters andutility of political sociology. ➢ To provides knowledge on development of political sociology, political culture, socialization and political mobility.
	5.6	Human Rights	➢ It provides understanding on growth and evolution of human rights, classification- three generation of human rights through its universal, cultural- relative approach. ➢ Role of UNO in International bill ofrights, conventions, human rights council and NGO's like amnesty international, human rights watch and international committee of the Red Cross for the protection of human rights.
VI	6.1	Indian Political Thought	➢ It introduces the students to the contribution of the main traditions of Indian political thinker to political thought. ➢ It acquaints the students with the political thought of leading Indian thinkers

	6.2	Select Constitution	➢ The Students will know the basic concepts of political system ➢ The students be given knowledge of political system of CHINA and SWITZERLAND.
	6.3	General Sociology	➢ Students will know about basic concepts of society along with the contribution made by various sociologists towards the field of sociology. ➢ It focuses on culture, its variability and functions.
	6.4	Contemporary Political Ideologies	➢ This paper will acquaint students with various ideologies and issues of political system ➢ Students will have an understanding of those and so that they can contribute towards the solution of some burning problem of the society.
	6.5	Political Sociology	➢ This paper will make students acquainted with the relation between society and politics. ➢ Students will be able to learn about different socio political process and dynamics.
	6.6	Human Rights in India	➢ The students will be provided the basic concepts and issues concerning human rights ➢ The course will acquaint the students with contemporary challenges towards human rights in India.

SUBJECT: POLITICAL SCIENCE (GENERAL)

Semester	**Course Code**	**Course Name**	**Course Outcomes**
I	1.1	Political	➢ To provide

		Theory-I	conceptual knowledge onpolitical theory and its approaches as well as on power, ideology and state. ➢ To familiarise with the basic normative concept of political theory. ➢ To build up from a conceptual base and relates the ideas to the practical domain where different political ideas have influenced the society at large.
II	2.1	Political Theory -II	➢ To provide knowledge on democracy, development, alternative development views on Development viz. Sustainable Development, Human Development etc. multiculturalism and social justice. ➢ To familiarise with the basic normative concept of political theory.

			➢ To build up from a conceptual base and relates the ideas to the practical domain where different political ideas have influenced the society at large.
III	3.1 (A)	International Relations -I	➢ To provide conceptual knowledge on international relation, international politics, Balance of power, collective security, national interest, ideology etc. ➢ To provide knowledge on the causes and consequences of two world wars and cold war. ➢ The paper provides an understanding of evolution and transformation of international relations. From a conceptual background, the paper identifies principal actors and some of the processes that are

			key to contemporary international relations. ➢ This paper deals with concepts and dimensions of international relations and makes an analysis of differenttheories highlighting the major debates and differences within the various theoretical paradigms. The dominant theories of power and different aspects of balance of power are included.
	3.1 (B)	Politics in India-I	➢ To understand the evolution of constitution of India from pre-independence to post independence period and also about the organs of the governmentviz. executives, legislature and judiciary both at centre and state and their powers and functions. ➢ To familiarize students with the Constitutional

			arrangements and processes in India. ➢ To focus on some ofthe fundamentalinstitutional arrangements that guides the state policy and protects people's rights. Emphasis will be both on the origin and development of such mechanisms inIndia. ➢ To understand historically the advent of colonialism in Indiaand the emergenceofthe discourse on nationalism as a response to it. Theaim is to engage with theoretical explanations of colonialism and nationalism in India at the same time study the social, political and institutional practices that unfolded in that period, gradually paving way towards independence and democracy in India.

IV	4.1 (A)	International Relations-II	➢ To enrich knowledgeon foreign policy, diplomacy, roles of United Nations, global economyfromcolonial period andimpact of globalization in third world countries. ➢ To make students aware of the Euro - centricism of International Relations by highlighting certain specific perspectives from the Global South. ➢ The student is expected to study International Politics and India's Foreign Policy from a pro- active and futuristic perspective.
	4.1 (B)	Politics in India -II	➢ To provide knowledge on contemporary India, relations between centre and states,party system, election system and challenges in national integration. ➢ To familiarize

			students with the Constitutional arrangements and processes in India.
V	5.1	Public Administration -I	➢ To understand public administration through scientific theories on administrative system, ➢ To provide knowledge on principles and structures of organization, good governance and new public management. ➢ To familiarise students with the fundamentals of Public Administration. It emphasizes on both the organizationaland functionalaspects of administration and seeks to create an understanding about the accountability of administration. ➢ To provide knowledge to the students on comprehensive understanding of contemporary

			administrative developments.
	5.2	Select Constitutions-I	➢ It enriches knowledge about administrative, legislative and judicial system of United Kingdom as well as party system. ➢ It provides knowledge about federal system, National Government, Political Parties of the American Constitution. ➢ It enriches knowledge about executive legislative and administrative system of UK and USA Constitution bymaking a comparative study between the two. ➢ This paper studies the select Constitutions of the world by adopting a comparative approach. The ideological basis, constitutional and legal provisions,institutional arrangement and

			their social and seconomic background are to beexplained, analyzedand evaluated critically. The comparative perspective enablesthe students to understand the differences and similarities between the various constitutional arrangements. ➢ This paper exposes students to the leading model constitutions of the world. The effort isalso to cover leading constitutions of major continents viz. USA and UK. These constitutions are tobe studied in light ofthe political processes to gain understanding of the dynamics of actual politics and policy making in these countries.
V	6.1	Public Administration -II	➢ To provide knowledge on personal administration, financial administration, development

			administration and citizen centric administration. ➢ To provide knowledge to the students on comprehensive understanding of contemporary administrative developments.
	6.2	Select Constitutions- II	➢ It is on People's Republic of China, its Chinese revolution, structures of government, rights and duties of citizen and party system. ➢ It studies the Swiss political tradition, Swiss federalism, direct democracy, political parties and interest groups.

Program: Mathematics(MAJOR)

SEMESTER	COURSE CODE	PAPERS NAME	COURSE OUTCOME
I	1.1	Algebra and Trigonometry	1. Will gain basic knowledge about the algebraic and trigonometric functions 2. Will understand the applications in Physics, Chemistry and engineering etc.
	1.2	Calculus	1. Will understand application of differentiability as a rate of change 2. Will be introduced with applications to geometry
II	2.1	Coordinate geometry	1.Will encounter basic problems in 2 dimensional and 3 dimensional coordinate geometry 2.Will be introduced with basic applications
	2.2	Differential Equation	1.Will understand the fundamentals of differential equation 2. Will know applications in engineering
III	3.1	Abstract algebra	1. Will be acquainted with abstract operations of a Group 2. Will understand symmetry and its relation to group, subgroups etc.
	3.2	Linear algebra and vector	1. Will be able to deal with various operations of algebraic spaces 2. Will be introduced with linear transformations and relation to matrices
IV	4.1	Real Analysis	1.Will be introduced to the real number system, sequences and

			infinite series, their convergences 2. Able to know applications in various fields
	4.2	Mechanics	1.Will gain the basic knowledge of Mechanics 2. Will be familiarised with applications that are related to our day to day life
V	5.1	Real and complex analysis	1.Will understand complex number system 2. Will be able to do complex integrations
	5.2	Topology	1.Will gain the knowledge about spheres and some problems related to it 2.Will gain preliminary notions about continuity, compactness and connectedness
	5.3	Spherical Trigonometry and Astronomy	1.Will know about the space and celestial bodies 2. Will know about their movements
	5.4	Rigid Dynamics	1. Will gain basic knowledge of dynamics of rigid bodies 2. Will know some applications in day to day life
	5.5	Probability	1. Will get familiar with basic notions of probability 2. Will understand basic conditional probability, Bayes theorem etc.
	5.6	Optimization Theory	1. Will gain the knowledge of basic linear programming problem 2. Will know the applications in minimising cost and maximising profit in various fields

VI	6.1	Hydrostatics	1. Will know about pressure equation, Buoyancy, Gas laws etc. 2. Will know some applications
	6.2	Numerical Analysis	1. Will gain the basic knowledge of various approximation techniques 2. Will be able to do basic error analysis for various approximations.
	6.3	Computer Programming in C	1. Will be able write basic algorithms 2. Will be able to write some basic programs
	6.4	Discrete Mathematics	1. Will be introduced with some basics of elementary number theory 2. Will gain some basic knowledge of mathematical logic, Boolean algebra etc.
	6.5	Graph and Combinatorics	1. Will know basic notions of graphs, different types of counting in Combinatorics etc. 2. Will know some applications such as colouring problem, game theory etc.
	6.6	Project	1. Will gain some preliminary exposure to research in Mathematics

Program outcomes : Sanskrit

PROGRAMME OUTCOMES: The programme has enabled UG level students of Sanskrit to be introduced with Indian age-old heritage, accumulating in the last forty centuries, exercising inexpressible impact on the life and culture of the Indians with the explicit aim of inspiring as well as uplifting qualitatively each and everyone, directlyor otherwise concerned with.

COURSE OUTCOMES (MAJOR):

SEMESTER-I:

PAPER-I: This paper is designed to introduce the studentswith Vedic concept of god partially. It alsointroduces students with Pratyaksa, a pramana of the Indian Nyaya- Vaisesika Philosophy.

PAPER –II: This paper aims at making the students acquainted with the work , Raghuvamsa of the Great poet Kalidasa. It also incorporates the famous drama of Bhasa- Svapnavasavadattam with a view to givingknowledge ofancient Indian dramatic system. A part of Sanskrit grammar has also been included to this paper which is supposed to enrich the grammatical base of the students.

SEMESTER II:

PAPER I: The course has enhanced the inquisitiveness of the students for knowing the historical background of the classical Sanskrit literature. It is designed also for making the students familiar to theVaradaraja's simple analysis on Sandhi and Karakabibhakti. Both forming significant portions of the Siddhantakaumudi, a commentarial write-up on Panini's Astadhyayi. Moreover, fundamental topics
of Sanskrit grammar at large are also aimed at to be taught.

PAPER II: This course is intended for enriching the students' mindset through lofty teaching scattered into Hitopadesa, a great repository of moral lessons, a commendable work of classicalSanskrit literature by PanditNarayana.

SEMETER III:

PAPER I: The course is intended for making the students acquainted with the two highly adored Mahakavyas namely , the Ramayana and the Mahabharata in order that the impact of the grand teachingsof these both might sanctify the taught and believe of upcoming learners of Sanskrit.

PAPER II: The outcome of this course is to introduce the students with the keynote essentials of the rhetorical work Sahityadarpana of Viswanatha Kaviraja to ensure the better learning outcome in the areaof grammar, a few principal chapters of Varadaraja's Laghusiddhantakaumudi are also incorporated in the course.

SEMESTER IV:

PAPER I: The course is intended for imparting knowledge as to philological speculation expected to increase the level of students outlook on Sanskrit linguistics. It is also intended for acquiring knowledge about the concept of sentence in Mimamsa philosophy. It also aims at introducing a glimpse of the Indianart through which a good many number of styles of Indian art and paintings may easily be learn about.
PAPER II: Through this course, the students to peep into a specific area of the history of Sanskrit literature.It is meant also for helping students in knowing Indian philosophical systems in common perspective. It also helps learning Indian logic to some extent.

SEMESTER V:
PAPER I : The course aims at helping the students to be introduced to the Rigvedic, the Atharvanic and theBrahmanic texts which may be inspire-giving for the students to be in pursuit of knowledge of excellence. **PAPER II:** The course aims at broadening the students' outlook in respect of poetry as suggested and affirmed by established rhetoricians of the remote past of India. It also aims at enlightening the students by the inclusion of thecontents concerned to poetry, playing determining role in creating good poetry.
PAPER III: The course is designed to introduce the students with the masterly piece of Sanskrit proseromance, The Kadambari, composed by Banabhatta. Moreover, it introduces the readers with the immortal creation Abhijnanasakuntalam by Mahakavi Kalidasa.
PAPER IV: The course is designed to acquaint the students two viz., The Kiratarjuniyam and the Kumarasambhavam and also with the Nitisataka, the famous collection of Bhattihari, of verses with highethicalvalue.
PAPER V: The course aims at imparting knowledge on Upanisadic knowledge revealed through the Kathopanisad related to the Krishnayajurveda. Moreover, through it students acquire knowledge on Vedic words special referenceto the gods. Besides it Vedic grammar is also sought to be taught.
PAPER VI: The course intends to impart the knowledge of Charvaka and Paninian Darsana asenvisaged inMadhavacharya's Sarvadarsana-Samgraha. It also includes fourteen karikas of Samkhya Philosophy with Gaudapada-Bhasya.

SEMESTER VI: The courses included here inserts the following topics: Aksharabrahmayuga of the Srimadbhagavadgita, glimpses of the Advaita Vedanta Philosophy and the Bauddha Philosophy, Vastuvidya and Brikshayurveda of the Brihaddevata, Lilavati of Bhaskaracharya, Samhita of Maharshi Caraka and information technology, Philology, Sahityadarpana of Viswanatha Kaviraja (chap. II and IX), Philology, Siddhantakaumudi, survey of Astronomy, Mathematics etc., Kautilya's Arthasastra, Naradasmriti (chap.I and IV).

The B.A general courses also insert more or less the same type of contents as may be conducive to learning of the Sanskrit.

Science Stream:

Department of chemistry
Kamrup College, Chamata

Programme: Chemistry (Major)

The objective of this undergraduate chemistry major course is to provide students with a comprehensive understanding of the fundamental principles and concepts of chemistry. Through a combination of theoretical knowledge and practical laboratory experiences, students will develop the necessary skills and knowledge to analyze and solve chemical problems, as well as apply their understanding to various scientific and real-world contexts.

By the end of the course, students should be able to:

1. Demonstrate a solid understanding of the key principles, theories, and laws governing the behavior and interactions of matter at the atomic and molecular levels.
2. Apply quantitative and qualitative analytical techniques to evaluate chemical systems and determine their properties, including chemical composition, reactivity, and equilibrium.
3. Interpret and analyze experimental data, employing statistical methods and scientific reasoning to draw meaningful conclusions.
4. Utilize laboratory skills and techniques to conduct experiments, demonstrate proficiency in handling chemicals safely, and accurately record and interpret experimental observations.
5. Identify and explain the various branches of chemistry, including organic, inorganic, physical, and analytical chemistry, and understand their respective roles in scientific research and applications.

Overall, this course aims to equip undergraduate chemistry majors with a strong foundation in the principles, theories, and practical skills required for further study or professional work in the field of chemistry, while fostering a scientific mindset and an enthusiasm for lifelong learning.

Semester	Course code	Paper's Name	Outcome
I	CHE-HC-1016	INORGANIC CHEMISTRY I	• Basic theoretical understanding about the basic constituents of matter – atoms, ions and molecules. • Accompanying laboratory course offer hands-on experience of basic quantitative analytical techniques related to volumetric titrations.
	CHE-HC-1026	PHYSICAL CHEMISTRY I	• Student will learn about the kinetic theory of gases, ideal gas, real gases, properties of liquid, vapour pressure, surface tension, viscosity, elementary idea of symmetry, ionic equilibria etc.
II	CHE-HC-2016	ORGANIC CHEMISTRY I	• Students will be able to identify different classes of organic compounds, describe their reactivity and explain/analyse their chemical and stereo chemical aspects.
	CHE-HC-2026	PHYSICAL	• Student will learn about laws of

		CHEMISTRY II	thermodynamics chemical equilibrium, solutions and colligative properties. • Students will be able to understand the chemical systems from thermodynamic point of view.
III	CHE-HC-3016	INORGANIC CHEMISTRY II	• Students would be able to apply theoretical principles of redox chemistry in the understanding of metallurgical processes
	CHE-HC-3026	ORGANIC CHEMISTRY II	• Students will be able to describe and classify organic compounds in terms of their functional groups and reactivity.
	CHE-HC-3036	PHYSICAL CHEMISTRY III	• Student will learn about 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.
	CHE-SE-3044	CHEMICAL TECHNOLOGY & SOCIETY	• Students will be familiarized with processes and terminologies in chemical industry, like mass balance, energy balance etc… • Students will be able to use chemical and scientific literacy as a means to better understand the topics related to the society.
IV	CHE-HC-4016	INORGANIC CHEMISTRY III	• 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. • Student will be able to design experiments independently.
	CHE-HC-4026	ORGANIC CHEMISTRY III	• 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.
	CHE-HC-4036	PHYSICAL CHEMISTRY IV	• 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.
	CHE-SE-4024	GREEN METHODS IN CHEMISTRY	• Students will be able to describe and evaluate chemical products and processes from environmental perspective, define and propose sustainable solutions and critically assess the methods for waste reduction and recycling.
V	CHE-HC-5016	ORGANIC CHEMISTRY IV	• 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.
	CHE-HC-5026	PHYSICAL CHEMISTRY V	• students will learn about the application of quantum mechanics in some simple chemical systems such as hydrogen atom or hydrogen like ions. • They will able to understand the basics of various kinds of spectroscopic techniques and photochemistry.
	CHE-HE-5026	ANALYTICAL METHODS IN CHEMISTRY	• Students will learn 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.
VI	CHE-HC-6016	INORGANIC CHEMISTRY IV	• students will be expected to learn about how ligand substitution and redox reactions take place in coordination complexes. • They will be familiar with the variety of catalysts based on transition metals and their application in industry. • 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.
	CHE-HC-6026	ORGANIC CHEMISTRY V	• Students will be able to explain/describe basic principles of different spectroscopic techniques and their importance in chemical/organic analysis. • Students will be able to classify/identify/critically examine carbohydrates, polymers and dye materials.
	CHE-HE-6016	GREEN CHEMISTRY	• Students will learn about the emerging discipline of green chemistry particularly to differentiate as to how the principles of green chemistry may be applied to organic synthesis.
	CHE-HE-6046	RESEARCH METHODOLOGY FOR CHEMISTRY	• Students will be able to construct a rational research proposal to generate fruitful output in terms of publications and patents in the field of chemical sciences.

Programme: Chemistry (Regular)

The objective of this regular chemistry course for undergraduate students is to provide a solid foundation in the fundamental principles and concepts of chemistry. Through a combination of theoretical knowledge, practical applications, and critical thinking, students will develop the necessary skills and understanding to navigate the world of chemistry and its applications in everyday life.

By the end of the course, students should be able to:

1. Demonstrate a basic understanding of the fundamental principles of chemistry, including atomic structure, chemical bonding, and the periodic table.

2. Explain and apply key chemical concepts such as stoichiometry, equilibrium, and reaction kinetics.
3. Utilize basic laboratory techniques to safely handle chemicals, conduct experiments, and accurately record and interpret experimental data.
4. Apply problem-solving skills to quantitative and qualitative chemical problems, demonstrating an ability to think critically and analytically.
5. Recognize the importance of chemistry in everyday life and understand its applications in various fields, such as medicine, environmental science, and industry.

Overall, this course aims to provide undergraduate students with a comprehensive understanding of the fundamental principles of chemistry, enabling them to make informed decisions, think critically, and appreciate the impact of chemistry on various aspects of their lives.

Semester	Course code	Paper's Name	Outcome
I	CHE-RC/HG-1016	CHEMISTRY 1	• Students will learn the atomic structure through the basic concepts of quantum mechanics. • Student will understand the chemical bonding through VB and MO approaches. • Students are expected to learn basic ideas used in organic chemistry, stereochemistry, functional groups, alkanes, alkenes, alkynes etc.
II	CHE-RC/HG-2016	CHEMISTRY 2	• Students will learn periodic properties in main group elements, transition metals (3d series) • Student will also learn the crystal field theory in coordination chemistry unit. • Students are expected to learn kinetic theory of gases, ideal gas and real gases, surface tension, viscosity, basic solid state chemistry and chemical kinetics.
III	CHE-RC/HG-3016	CHEMISTRY 3	• Students will able to understand the chemical system from thermodynamic points of view and two very important topics in chemistry- chemical equilibrium and ionic equilibrium. • Students are expected to learn various classes of organic molecules-alkyl halides, aryl halides, alcohols, phenols, ethers, aldehydes and ketones.
	CHE-SE-3034	BASIC ANALYTICAL CHEMISTRY	• Students will be able to explain the basic principles of chemical analysis, design/implement

			microscale and semimicro experiments, record, interpret and analyze data following scientific methodology.
IV	CHE- RC/HG-4016	CHEMISTRY 4	• Students learn solutions, phase rule and its application in specific cases, basics of conductance and electrochemistry. • Students will learn some important topics of organic and biochemistry- carboxylic acids, amines, amino acids, peptides, proteins and carbohydrates.
	CHE-SE-4024	GREEN METHODS IN CHEMISTRY	• Students will be able to describe and evaluate chemical products and processes from environmental perspective, define and propose sustainable solutions and critically assess the methods for waste reduction and recycling.
V	CHE-RE-5026	ANALYTICAL METHODS IN CHEMISTRY	• Students will learn 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.
	CHE-SE-5014	CHEMICAL TECHNOLOGY & SOCIETY	• Students will be familiarized with processes and terminologies in chemical industry, like mass balance, energy balance etc… Students will be able to use chemical and scientific literacy as a means to better understand the topics related to the society.
VI	CHE-RE-6016	GREEN CHEMISTRY	• Students will learn about the emerging discipline of green chemistry particularly to differentiate as to how the principles of green chemistry may be applied to organic synthesis.
	CHE-RE-6046	RESEARCH METHODOLOGY FOR CHEMISTRY	• Students will be able to construct a rational research proposal to generate fruitful output in terms of publications and patents in the

			field of chemical sciences.
	CHE-SE-6024	PESTICIDE CHEMISTRY	• Students will be able to explain or describe and critically examine different types of pesticides, their activity/toxicity and their applications and the need for the search of an alternative based on natural products.

B.Sc Physics – Course Outcome:

The objective of an undergraduate Physics program as per the CBCS system of Gauhati University is to provide students with a comprehensive, high-quality education in the physical sciences. It also aims to help students understand the basic Physics concepts and significance of various physical phenomena and apply the theories learned and the skills acquired to solve real-time problems. The program also aims to provide students with an academic base that responds to the need of the students to understand the basics of Physics and its ever-evolving nature of applications. The program specific outcomes are:

- The students will gain a scientific understanding of the fundamental concepts in Physics through the study of Classical Mechanics, Electromagnetic Theory, Optics, Heat and Thermodynamics, Statistical Mechanics, Solid State Physics, Nuclear Physics, Modern Physics, Quantum Mechanics, along with other areas of Physics.
- The students will learn how to use computers at an appropriate level for: a) experimental design and implementation; b) analysis of experimental data; c) numerical and mathematical methods in problem solving; and apply them for theoretical problem solving in Physics and related disciplines.
- The students will develop some computational ability utilizing open source software programs as Gnuplot, Python, Numpy, Scipy, Matplotlib, Matlab, LaTex, Arduino IDE, etc. on both Linux and Windows platforms. This will not only get them ready for further studies or research in any area of physics, but it will also get them ready for a variety of jobs in the IT industry and other fields.
- The students will gain good communication skills to express their knowledge of physics in the form of maintaining laboratory note books, project work, seminar presentations, poster presentations, wall magazines, models, and other modes, ranging from fundamental principles to specialized advanced topics, and will develop their ability to collaborate as well as to work independently.
- The students will acquire the necessary skills to read scientific literature and gain purposeful knowledge of scientific ethics, especially in the domain of Physics.

SEMESTER	PAPER CODE	COURSE NAME	COURSE OUTCOME

1	**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**	On successful completion of the course students should be able understand Inertial and non inertial

			reference frames, Newtonian motion, Galilean transformations, projectile motion, work and energy, Elastic and inelastic collisions, motion under central force, simple harmonic oscillations, special theory of relativity.
1	**PHY-HG/RC-1016**	**Mechanics**	Upon completion of this course, students are expected to understand the role of vectors and coordinate systems in Physics, solve Ordinary Differential Equations, laws of motion and their application to various dynamical situations, Inertial reference frames their transformations, concept of conservation of energy, momentum, angular momentum and apply them to basic problems, phenomenon of simple harmonic motion, motion under central force, concept of time dilation, Length contraction using special theory of relativity. In the laboratory course, after acquiring knowledge of how to handle measuring instruments (like screw gauge, Vernier calipers, travelling microscope) student shall embark on verifying various principles and associated measurable parameters.
2	**PHY-HC-2016**	**Electricity & Magnetism**	After successful completion of this course, students will be able to Understand electric and magnetic fields in matter, Dilectric properties of matter magnetic properties of matter, electromagnetic induction, applications of Kirchhofff's law in different circuits, applications of network theorem in circuits.
	PHY-HC-2026	**Waves & Optics**	After successful completion of this course, students will be able to Understand superposition of harmonic oscillations, different types of wave motions, superposition of harmonic waves, interference and interferometer, diffraction, holography.
	PHY-HG/RC-2016	**Electricity & Magnetism**	Upon completion of this course, students are expected to apply Gauss's law of electrostatics to solve a variety of problems, calculate the magnetic forces that act on moving charges and the magnetic fields due to currents, have brief idea of magnetic materials, understand the concepts of induction, and apply them to solve variety of problems. In the Lab course, students will be able to measure esistance (high and low), Voltage, Current, self and mutual inductance, capacitor, strength of magnetic

			field and its variation, study different circuits RC, LCR etc.
3	**PHY-HC-3016**	**Mathematical Physics II**	After successful completion of the course, 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**	Upon successful completion, students will have the knowledge and skills to identify and describe the statistical nature of concepts and laws in thermodynamics, in particular: entropy, temperature, Thermodynamics potentials, Free energies, Maxwell's relations in thermodynamics, behaviour of real gases.
	PHY-HC-3036	**Digital Systems & Applications**	After successful completion of the course student will be able to understand the working principle of CRO, develop a digital logic and apply it to solve real life problems, Analyze, design and implement combinational logic circuits, Classify different semiconductor memories, Analyze, design and implement sequential logic circuits, Analyze digital system design using PLD, Simulate and implement combinational and sequential circuits.
	PHY-HG/RC-3016	**Thermal Physics & Statistical Mechanics**	Upon completion of this course, students are expected learn the basic concepts of thermodynamics, the first and the second law of thermodynamics, the concept of entropy and the associated theorems, the thermodynamic potentials and their physical interpretations, Maxwell's thermodynamic relations, fundamentals of the kinetic theory of gases, Maxwell-Boltzman distribution law, equipartition of energies, mean free path of molecular collisions, viscosity, thermal conductivity, diffusion and Brownian motion, black body radiations, Stefan- Boltzmann's law, Rayleigh-Jean's law and Planck's law and their significances, quantum statistical distributions, viz., the Bose-Einstein statistics and the Fermi-Dirac statistics. In the laboratory course, the students will be able to Measure of Planck's constant using black body radiation, determine Stefan's Constant, coefficient of thermal conductivity of a bad conductor and a

3			good conductor, determine the temperature coefficient of resistance, study variation of thermo emf across two junctions of a thermocouple with temperature etc.
	PHY-SE-3024	Computational Physics Skills	The outcome of this course is to teach computer programming and numerical analysis and to emphasize its role in solving problems in Physics. • Highlights the use of computational methods to solve physical problems • Use of computer language as a tool in solving physics problems (applications) • Course will consist of hands on training on the Problem solving on Computers.
4	PHY-HC-4016	Mathematical Physics III	On successful completion of the course 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 co-variant tensors, indices rules for combining tensors.
	PHY-HC-4026	Elements of Modern Physics	On completion of the course students will be able to understand modern development in Physics, Starting from Planck's law, it development of the idea of probability interpretation and the formulation of Schrodinger equation. Students will also get preliminary idea of structure of nucleus, radioactivity Fission and Fusion and Laser.
	PHY-HC-4036	Analog Systems & Applications	On successful completion of the course students will be able to understand about the physics of semiconductor p-n junction and devices such as rectifier diodes, zener diode, photodiode etc. and bipolar junction transistors, transistor biasing and stabilization circuits, the concept of feedback in amplifiers and the oscillator circuits, students will also have an understanding of operational amplifiers and their applications.
	PHY-HG/RC-4016	Waves & Optics	Upon completion of this course, students are expected to understand Simple harmonic oscillation and superposition principle, importance of classical wave equation in transverse and longitudinal waves and solving a range of physical systems on its basis,

4			concept of normal modes in transverse and longitudinal waves: their frequencies and configurations, interference as superposition of waves from coherent sources derived from same parent source, Demonstrate understanding of Interference and diffraction experiments, Polarization. In the laboratory course, student will gain hands-on experience of using various optical instruments and making finer measurements of wavelength of light using Newton Rings experiment, Fresnel Biprism etc. Resolving power of optical equipment, the motion of coupled oscillators, study of Lissajous figures and behaviour of transverse, longitudinal waves.
	PHY-SE-4064	**Radiation Safety**	To ensure safety of the public, occupational workers and the environment, this course on the basic knowledge of radiation safety is introduced. The course is designed in such a way to acquaint the students with the sources of various natural and man-made radiation sources, risks involved in working in relatively high radiation zone, and safety measures to be taken to protect individual's health. The students will acquire a basic knowledge of types and sources of radiations, interactions of radiations with matter, risks involved and safety measures to be taken.
5	**PHY-HC-5016**	**Quantum Mechanics & Applications**	On successful completion of the course students will be able to understand the principles in quantum mechanics, such as the Schrödinger equation, the wave function, the uncertainty principle, stationary and non-stationary states, time evolution of solutions, as well as the relation between quantum mechanics and linear algebra. Students will be able to solve the Schrödinger equation for hydrogen atom. Students will have the concepts of angular momentum and spin, as well as the rules for quantization and addition of these, spin-orbit coupling and Zeeman Effect.
	PHY-HC-5026	**Solid State Physics**	On successful completion of the course students should be able to explain the main features of crystal lattices and phonons, understand the elementary lattice dynamics and its influence on the properties of materials, describe the main features of the physics of electrons in solids; explain the dielectric

5			ferroelectric and magnetic properties of solids and understand the basic concept in superconductivity.
	PHY-HE-5036	**Advanced Mathematical Physics I**	Upon completion of this course, students will be able to solve problems in Physics related to Linear Vector space, Matrix algebra, Tensor.
	PHY-HE-5056	**Nuclear and Particle Physics**	Upon completion of this course, students will have the understanding of the sub atomic particles and their properties. They will gain knowledge about the different nuclear techniques and their applications in different branches of Physics and societal application. The course will develop problem-based skills and the acquire knowledge can be applied in the areas of nuclear, medical, archaeology, geology and other interdisciplinary fields of Physics and Chemistry.
6	**PHY-HC-6016**	**Electromagnetic Theory**	On successful completion of the course students will acquire the concepts of Maxwell's equations, propagation of electromagnetic (EM) waves in different homogeneous-isotropic as well as anisotropic unbounded and bounded media, production and detection of different types of polarized EM waves, general information as waveguides and fibre optics.
	PHY-HC-6026	**Statistical Mechanics**	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.
	PHY-HE-6016	**Communication Electronics**	Upon completion of this course, students will have the concepts of electronics in communication, details of communication techniques based on Analog Modulation, Analog and digital Pulse Modulation including PAM, PWM, PPM, ASK, PSK, FSK, overview of communication and Navigation systems such as GPS and mobile telephony system.

	PHY-HE-6036	**Advanced Mathematical Physics II**	Upon completion of this course, students will be able to apply the concepts of Calculus of Variations, Group Theory and Probability Theory to solve numerical problems in Physics.

Botany

Programme Outcome/Programme Specific Outcome/Course Outcome

Specific course outcome of Botany Major and General syllabus prescribed by Gauhati University may be cited below:

Programme : Botany (Honours)

SEMESTER	COURSE CODE	PAPER'S NAME	COURSE OUTCOMES
I	BOT-HC-1016	Phycology and Microbiology	▪ Basic knowledge on viruses and bacteria, and their importance in agriculture and medicine ▪ Basic knowledge on Algal classification, Economic and ecological importance of Algae ▪ Practical knowledge on structure and life cycle of Bacteriophage ▪ Practical knowledge on gram staining and microscopy of bacteria & algae
	BOT-HC-1026	Biomolecules and Cell Biology	• Knowledge on structure, classification and physicochemical properties of biomolecules and enzymes • Basic knowledge on structure, properties and functions of cell and its components • Practical knowledge on properties of cell and cell membrane microscopy of plant cell, and on qualitative tests of biomolecules

II	BOT-HC-2016	Mycology and Phytopathology	• Knowledge on different classes of fungi, their structure, classification, life cycle and reproduction • Basic knowledge on diseases in plants caused by viruses, bacteria and fungi and biotechnological applications of fungi • Structural analysis of different classes of fungi and their reproductive stages • Knowledge on structures of symbiotic associations (Lichens, Mycorrhiza) • Practical knowledge of different fungi and diseased specimens
	BOT-HC-2026	Archegoniate	• 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 knowledge on morphology and reproductive structures of archegoniates • Detailed knowledge on male and female reproductive structures in gymnosperms
III	BOT-HC-3016	Morphology and Anatomy of Angiosperms	• Knowledge on morphology of angiosperms, developmental biology of plant body, and structural & anatomical organization of tissue system in plants • Practical knowledge on inflorescences, fruits of angiosperms and anatomical features of plant body
	BOT-HC-3026	Economic Botany	• Knowledge on morphology, uses and economic importance of crop plants such as cereals, legumes, spices, Fibres, Timber plants, Drug-

			yielding plants etc. • Practical knowledge on economically important plant parts and their products
	BOT-HC-3036	Genetics	• Knowledge on Mendelian concepts in genetics; structure, functions and properties of chromosome; chromosomal aberration • Knowledge on gene structures and gene mutations, population genetics • Practical knowledge on chromosomal mapping and gene interaction studies • Practical visualization of chromosomal anomalies
IV	BOT-HC-4016	Molecular Biology	• 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 knowledge 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	• Knowledge on origin, formation and properties of abiotic components of the ecosystem, interactions and adaptation of plants with biotic and abiotic factors • Knowledge on properties of communities in a population and trophical and habitat organization in an ecosystem • Practical knowledge on property analysis of abiotic components of the ecosystem

			• Practical knowledge on vegetation study and different ecological sites
	BOT-HC-4036	Plant Systematics	• Knowledge on plant identification and classification systems, plant nomenclature • Knowledge on phylogenetic and evolutionary relationships of angiosperms • Practical knowledge on foliar morphology and taxonomical study of angiosperms
V	BOT-HC-5016	Reproductive Biology of Angiosperms	• Knowledge on detailed morphological and anatomical study of reproductive structures of angiospermic plants • Knowledge on embryology and embryological abnormalities in angiosperms • Structural documentation of reproductive structures of angiosperms • Practical knowledge on developmental biology of embryo and endosperms
	BOT-HC-5026	Plant Physiology	• Knowledge on mechanisms of water, minerals and nutrient absorption of plants • Knowledge on roles of plant hormones and mechanism of flowering in plants • Practical knowledge on effects of growth regulators on plant parts and determination of osmotic and water potential
VI	BOT-HC-6016	Plant Metabolism	• Detailed knowledge of metabolic events of photosynthesis and nutrient metabolism • Knowledge of signalling molecules and pathways in the plant cell • Practical knowledge on different types of chromatographic

			techniques • Estimation of TAN, sugar and protein contents in plant sample
	BOT-HC-6026	Plant Biotechnology	• Knowledge on applications of tissue culture techniques, construction of recombinant DNA and transformation into hosts, construction of DNA libraries • Knowledge on development of transgenic plants for agricultural or industrial use • Practical utility on isolation of plasmid DNA, its digestion and separation of fragments through gel electrophoresis • Preparation of media for tissue culture techniques and photographic study of plant tissue culture • Photographic study of generating transgenic plants for agriculture
	BOT-HE-6026	Analytical techniques in Plant Sciences	• Knowledge on microscopy and imaging in plant science • Principles and application of centrifuge, spectroscopy and chromatography in biology • Basic knowledge on biostatistics including measures of central tendency and dispersions, statistical data analysis and representations • Practical knowledge on microscopy, chromatography, centrifugation and spectroscopy
	BOT-HE 6036	Dissertation	• Practical knowledge on addressing relevant scientific questions through experimentation

Programme: Botany (General)

SEMESTER	COURSE CODE	PAPER'S NAME	COURSE OUTCOMES
I	BOT-HG/RC-1016	Biodiversity (Microbes, Algae, Fungi and Archegoniate)	• Knowledge on structure and reproduction of viruses and bacteria, and their economic importance • Knowledge on characteristics features, classifications, reproductive mechanisms, life cycle pattern and ecology of different genera of algae and fungi • Understand the importance / significance and mechanism of symbiotic associations of algae-fungi and fungi-higher plants • Knowledge on archegoniate and alternation of generations • Knowledge on classifications, reproductive mechanisms, ecology, evolution and economic significances of bryophyte, pteridophyte and gymnosperm • Knowledge on T phage and TMV, lytic and lysogenic cycles of viruses • Understand different types of bacteria, their structure and reproduction types, gram staining procedures • Knowledge on morphology, anatomy and reproductive structures of different general of algae, fungi, bryophytes, pteridophyte and gymnosperms • Practical knowledge on staining and slide preparation to study bacteria, algae and fungi under the microscope.
II	BOT-RC/HG-2016	Plant Ecology and Taxonomy	• Basic knowledge on Ecology, Know about ecological factors, law of tolerance, Adaptation of hydrophytes and xerophytes

			• Knowledge on plant communities and its characteristics, processes and types of succession • Understanding concept of ecosystem and its structure, knowledge on production and productivity in ecological pyramids, biogeochemical cycles of Carbon, Nitrogen and Phosphorus • Knowledge on phytogeography and principle of biogeographical zones of India • Knowledge on plant taxonomy, its identification, Classification and Nomenclature • Understanding on plant Identification, importance of herbarium and botanical gardens of the world and India, documentation and Keys • Knowledge on taxonomic evidences from palynology, cytology, phytochemistry and molecular data, understanding about taxonomic hierarchy such as ranks, categories and taxonomic groups • Knowledge on Botanical nomenclature, binominal system Principles and rules (ICN), classifications and types of classification • Knowledge on characters used in taxonomy and variations of biometrics, numerical taxonomy and cladistics • Practical Knowledge on ecological instruments such as Soil thermometer, maximum and minimum thermometer, anemometer, psychrometer / hygrometer, rain gauge and lux meter • Practical knowledge on determination of minimal quadrat

			size for the study of herbaceous vegetation by species area curve method • Practical knowledge on Quantitative analysis of herbaceous vegetation for frequency and comparison with Raunkiaer's frequency distribution law • Practical knowledge on vegetative and floral characters of plant family - Brassicaceae, Solanaceae and Lamiaceae • Hands on preparation of herbarium sheet with proper mounting and pressing of dried wild plant specimen
III	BOT-RC/HG-3016	Plant Physiology and Metabolism	• Knowledge on different types of plant-water relationship, their significance and factors • Knowledge on different macro- and micro-nutrients and mineral uptakes in plants; knowledge on different carriers, channels and pumps • Understanding phloem loading and unloading, pressure flow model • Knowledge on different types of photosynthetic pigments, Photosystem I and II, electron transport and mechanism of ATP synthesis, different types of pathways of photorespiration and carbon fixation • Basic knowledge on different pathways of respiration – glycolysis, TCA and PPP pathways • Knowledge on structure and properties of enzyme and their catalysis and inhibition mechanisms • Knowledge on biological nitrogen fixation and metabolism • Knowledge on plant hormones, and plant responses to light and

			temperature • Determine osmotic potentials of plant cells and effect of light on transpiration • Basic idea on stomatal index and frequency, knowledge on enzyme activity and effect of pH, Knowledge on bicarbonate concentration and O2 evolution in photosynthesis of some plants • Understanding on Bolting, RQ and root respiration, Knowledge on auxin's role on rooting, basic idea on transpiration suction
IV	BOT-RC/HG-4016	Plant Anatomy and Embryology	• Understand the meristematic and permanent tissue of plant • Knowledge on the structure of monocot and dicot root, stem and leaf • Basic knowledge on vascular cambium, secondary growth in root and stem • Knowledge on epidermis, cuticle, stomata, adaptation in xerophytes and helophytes • Knowledge on the structure of anther and pollen, structure and types of ovules, types of embryo sacs, organization and ultrastructure of mature embryo sac • Understand the mechanism of pollination and adaptations, double fertilization, seed structure, and dispersal mechanism • Knowledge on endosperm types, structure, functions, and embryo-endosperm relationship • Basic knowledge on apomixis, polyembryony and their applications • Knowledge on meristems, parenchyma, collenchyma, sclerenchyma, xylem, phloem,

			anatomy of root, stem, and leaf, adaptations in xerophytes, helophytes, structure of anther, types of ovules, female gametophyte, pollination, seed dispersal embryo and endosperm • Hands on experiences on slide preparation for anatomical studies of leaf, stem and root • Flower dissection and study of flower reproductive parts and events
V *RDS-I (any one)*	BOT-RE-5016	Cell and Molecular Biology	• Understand the basic principle, function and working of microscopy used in research • Learn about the basics of cell and cell theory • Learn about the structure, composition and function of different cell organelles • Understand the structure and functions of cell membrane, membrane proteins and carbohydrates, membrane permeability and cell wall • Learn about cell cycle and its regulation at molecular level • Knowledge on history of DNA discovery, experiments related to DNA as the genetic material, structure and types of DNA and different modes of replication • Learn about types and structure of RNA, various types of RNA polymerases, basic knowledge on prokaryotic and eukaryotic translation and genetic code • Understand about regulation of gene expression in prokaryotes and eukaryotes • Practical knowledge on prokaryotic cells (bacteria), viruses and eukaryotic cells with the help of light and electron micrographs

			• Practical knowledge on photomicrographs of cell organelles • Practical knowledge on the structure of plant cell through temporary mounts • Practical knowledge on mitosis, meiosis, plasmolysis, deplasmolysis, micrometry • Understand the structure of nuclear pore complex by photograph and learn about special chromosomes either by slides or photographs. • Practical knowledge on micrograph study of DNA packaging • Practical knowledge on karyotype and ideogram preparation
	BOT-RE-5026	Economic Botany and Biotechnology	• Learn about the centres of origin of cultivated plants with special reference to Vavilov's work • Learn about the origin, morphology and uses of cereals • Understand about legumes with special reference to Gram and soybean • Learn about botanical name, family, part used, morphology and uses of spices with special reference to clove and black pepper • Knowledge on morphology, processing and uses of tea • Learn about fats and oils with special reference to groundnut • Knowledge on botanical name, family, parts used, morphology and uses of fiber yielding plants with special reference to cotton • A brief knowledge on biotechnology • Knowledge on plant tissue culture techniques • Learn about blotting techniques, DNA fingerprinting, molecular markers, DNA sequencing and types

			of PCR. Knowledge on hybridoma technology, ELISA, molecular diagnosis of human disease, and human gene Therapy • Understand the aim, scope and branches of bioinformatics, repositories of Biological Data Knowledge and retrieval system • Learn about molecular phylogeny, basics in proteomics and genomics and their applications in crop improvement and drug discovery • Practical knowledge on economically important plants through specimens, sections and microchemical tests • Practical knowledge on basic equipments used in tissue culture • Understand anther culture, somatic embryogenesis, endosperm and embryo culture; micropropagation through photograph • Practical knowledge on molecular techniques • Practical knowledge on data base searching, retrieval of Sequence from databases, sequence alignment, Homology and Phylogenetic tree
VI *RDS-2* *(Any one)*	BOT-RE-6016	Analytical Techniques in Plant Sciences	• Learn about principle of microscopy, flow cytometry, applications of fluorescence microscopy, chromosome banding, FISH, chromosome painting; transmission and scanning electron microscopy – sample preparation for electron microscopy, cryofixation, negative staining, shadow casting, freeze fracture, freeze etching • Knowledge on different types of centrifugation, marker enzymes • Learn about use of Radioisotopes in biological research, auto-

			radiography, pulse chase experiment • Learn about principle and application of spectrophotometer in biological research • Knowledge on different chromtoghrapic techniques used in research • Learn about mass spectrometry, X-ray diffraction, X-ray crystallography, characterization of proteins and nucleic acids, electrophoresis • Understand various statistical methods of analysis, measures of central tendency: arithmetic mean,mode, median; measures of dispersion: Range, mean deviation, variation, standard deviation, chi-square test for goodness of fit • Understand the concept of blotting technique, DNA finger printing, DNA sequencing and PCR through photograph • Understand the concept of ELISA • Practical knowledge on TLC and column chromatography • Practical knowledge on isolation of Chloroplasts by differential centrifugation • Practical knowledge on protein estimation through Lowry's method • Practical knowledge on PAGE, separation of DNA (marker) using AGE • Practical knowledge on different microscopic techniques using photographs/micrographs
	BOT-RE-6026	Dissertation	• Practical knowledge on addressing relevant scientific questions through experimentation

Skill Enhancement Courses in Botany

SEMESTER	COURSE CODE	PAPER'S NAME	COURSE OUTCOMES
III	BOT-SE-3014	Biofertilizers	• Basic knowledge on the microbes used as biofertilizer, and understanding the process of their isolation, identification, mass multiplication, carrier-based inoculants and knowledge on Actinorrhizal symbiosis • Concept on the general characteristics, isolation, mass multiplication carrier-based inoculants of *Azospirillum* and *Azotobacter* also the knowledge on the crop response to Azotobacter • Basic knowledge on Cyanobacteria including factors affecting growth of Cyanobacteria, concept on the nitrogen fixation and use of blue green algae in rice cultivation • Brief knowledge on the Mycorrhizal association and understand the details of various types, taxonomy, occurrence, distribution and growth parameters of Mycorrhiza • Details about the organic farming, maintenance and recycling of biodegradable waste material and understand the methods of making biocompost and vermicompost with application
IV	BOT-SE-4014	Nursery and Gardening	• Brief idea about objectives, scope, infrastructure and maintenance of Nursery • Concept on structure, types and dormancy of seeds and brief idea about seed storage including types and process and knowledge on seed production technology • Knowledge on various modes of vegetative propagation and maintenance of plants in green

			house • Brief idea about development and maintenance of gardening including scope and types and understand the various gardening operations including management of pests and diseases • Knowledge on managements of seeds and seedlings and concept about cultivation, storage and marketing of important vegetables
V	BOT-SE-5014	Medicinal Botany	• Knowledge on medicinal plants and indigenous medicinal sciences/systems of India • Understanding about the endangered and endemic medicinal plants, conservation issues and types • Knowledge on ethno-medicinal gardens, nursery and its classifications and components • Understanding ethno-botany, folk medicines and ethnic communities; Knowledge on applications of ethno-medicine/natural products for treatment of jaundice, cardiac, infertility, diabetics, blood pressure and skin diseases
VI	BOT-SE-6024	Mushroom Culture Techniques	• Understanding concept of mushroom culture technology, Knowledge on edible and poisonous • mushrooms, medicinal values of mushrooms and types of edible mushrooms • Understanding the cultivation techniques of mushrooms and factors associated with their cultivations, Knowledge on low-cost technology for mushroom production • Knowledge on storage and nutraceutical values of

			mushrooms, Understanding on food preparations and marketing of mushrooms

Zoology

OBJECTIVES FOR THE COURSES OFFERED AT THE DEPARTMENT OF ZOOLOGY, KAMRUP COLLEGE, CHAMATA

COURSE CODE	COURSE NAME	Course Outcomes
ZOO-HC-1016	Non-chordates I: Protista to Pseudocoelomates (including practicals)	1. Understand the diversity, classification, and characteristics of non-chordate organisms, ranging from Protista to Pseudocoelomates. 2. Gain practical experience in the identification, observation, and study of non-chordate specimens through hands-on activities.
ZOO-HC-1026	Principles of Ecology (including practicals)	1. Develop a foundational understanding of ecological concepts, including population dynamics, community interactions, and ecosystem functioning. 2. Apply ecological principles through practical activities such as field surveys, data collection, and analysis to study and interpret ecological patterns and processes.
ZOO-RC-1016	Animal Diversity (including practicals)	1. Explore the vast diversity of animal species across different phyla, including their morphology, adaptations, and evolutionary relationships. 2. Gain practical knowledge through hands-on activities involving the examination and identification of animal specimens, including their classification and characteristics.
ZOO-HC-2016	Non-chordates II:Coelomates (including practicals)	1. Study the diversity of coelomate organisms and their evolutionary significance within the animal kingdom. 2. Engage in practical activities such as dissection, microscopy, and observation of coelomate organisms to deepen understanding of their anatomy, physiology, and ecological roles. 3. How to prepare a project report, permanent slide 4. Dissection of animal and learn about the anatomy of it.
ZOO-HC-2026	Cell Biology (including practicals)	1. Gain a comprehensive understanding of the structure and function of cells, including organelles, cellular processes, and cell signaling. 2. How cell division and cell signalling occur. 3. How to prepare the temporary slides to see the various stages of mitosis and meiosis. 4. Learn to prepare permanent slide such as presence of bar body in human blood cell 5. Develop practical skills through hands-on activities

		such as microscopy, cell culturing, and experimentation to study and explore cellular phenomena.
ZOO-RC-2016	Comparative Anatomy and Developmental Biology of Vertebrates (including practicals)	1. Compare the anatomical structures and developmental processes among different vertebrate species. 2. Engage in practical activities involving the dissection, observation, and study of vertebrate specimens to deepen understanding of their anatomical variations and developmental patterns.
ZOO-HC-3016	Diversity of Chordates (including practicals)	1. Study the diversity of chordate organisms, including the characteristics, classification, and evolutionary relationships of various chordate groups. 2. Gain practical experience through hands-on activities such as specimen examination, identification, and comparative analysis of chordate organisms.
ZOO-HC-3026	Physiology: Controlling and Coordinating Systems (including practicals)	1. Study physiological structures and organs responsible for the construction of the animal body. 2. Learn how different systems work such as nervous, muscle, reproductive, endocrine systems work in particular.
ZOO-HC-3036	Fundamentals of Biochemistry (including practicals)	1. Gain a fundamental understanding of biochemistry. 2. Participate in practical exercises related to biochemistry.
ZOO-SE-3014	Ornamental Fish and Fisheries	1. Study the characteristics, biology, and classification of ornamental fish species. 2. Explore the principles and practices of ornamental fish breeding, rearing, and management in the context of the fisheries industry and the ornamental fish trade.
ZOO-RC-3016	Physiology and Biochemistry (including practicals)	1. Develop a comprehensive understanding of physiological processes and their biochemical basis. 2. Acquire practical skills in conducting experiments, analyzing data, and interpreting results in the fields of physiology and biochemistry.
ZOO-HC-4016	Comparative Anatomy of Vertebrates (including practicals)	1. Compare the anatomy of different vertebrate species. 2. Participate in practical activities related to comparative anatomy.

ZOO-HC-4026	Animal Physiology: Life sustaining systems (including practicals)	1. Study physiological systems responsible for sustaining life in animals. 2. Engage in practical exercises related to animal physiology.
ZOO-HC-4036	Biochemistry of Metabolic Processes (including practicals)	1. Study the biochemistry of metabolic processes. 2. Participate in practical exercises related to metabolic biochemistry.
ZOO-SE-4014	Non Mulberry Sericulture	1. Gain a comprehensive understanding of non- mulberry sericulture, including the principles, techniques, and processes involved in the production of non-mulberry silk. 2. Acquire knowledge of different non-mulberry silk- producing insects, their life cycles, and the specific rearing practices associated with each species. 3. Develop practical skills in non-mulberry silkworm rearing, including proper selection of host plants, maintaining optimal conditions for growth, and managing the health and hygiene of the silkworm colonies. 4. Learn the techniques for silk extraction, post- production treatments, and processing of non- mulberry silk, ensuring high-quality silk production.
ZOO-RC-4016	Genetics and Evolutionary Biology (including practicals)	1. Develop a solid understanding of genetic principles and mechanisms, including Mendelian genetics, DNA replication, gene expression, and genetic variation. 2. Explore the processes of genetic inheritance, mutation, genetic recombination, and their role in driving genetic diversity within populations. 3. Gain a comprehensive understanding of evolutionary biology, including the principles of natural selection, adaptation, speciation, and phylogenetics. 4. Apply evolutionary concepts to analyze and interpret biological data, such as DNA sequences, population genetics, and evolutionary relationships, using computational and practical approaches.
ZOO-SE-4014	Apiculture	1. Gain knowledge of the biology and behavior of honey bees, including their life cycle, social structure, and communication mechanisms. 2. Acquire practical skills in beekeeping techniques, such as hive management, honey extraction, and colony maintenance, to establish and maintain productive bee colonies

ZOO-HC-5016	Molecular Biology (including practicals)	1. Develop a deep understanding of the molecular mechanisms underlying biological processes, including DNA replication, gene expression, protein synthesis, and genetic regulation. 2. Acquire practical skills in molecular biology techniques, such as DNA extraction, PCR amplification, gel electrophoresis, and gene cloning.
ZOO-HC-5026	Principles of Genetics (including practicals)	1. Understand the fundamental principles of genetics, including inheritance patterns, genetic variation, and gene expression. 2. Apply genetic principles to analyze and interpret data related to traits, populations, and genetic disorders.
ZOO-HE-5016	Computational Biology and Biostatistics (including practicals)	1. Gain proficiency in using computational tools and algorithms to analyze biological data, such as DNA sequences and protein structures. 2. Apply statistical techniques to analyze and interpret biological data, including experimental results and epidemiological studies.
ZOO-HE-5046	Parasitology (including practicals)	1. Identify and classify different types of parasites, including protozoa, helminths, and arthropods. 2. Understand the life cycles, host-parasite interactions, and pathogenesis of parasitic organisms, and their impact on human and animal health.
ZOO-SE-5014	Non Mulberry Sericulture	1. Acquire knowledge of various non-mulberry silk- producing insects, such as Tasar, Eri, and Muga silkworms. 2. Understand the techniques and processes involved in rearing and harvesting non-mulberry silk, including silk spinning and fiber extraction.
ZOO-RE-5016	Applied Zoology	1. Apply knowledge of zoological concepts and principles to solve real-world problems in areas such as conservation, wildlife management, and environmental sustainability. 2. Develop practical skills in animal handling, field surveys, and laboratory techniques relevant to applied zoology research and practices.
ZOO-HC-6016	Developmental Biology	1. Gain an understanding of the processes and

	(including practicals)	mechanisms involved in the development and differentiation of organisms from a single cell to a complex multicellular organism. 2. Apply experimental techniques, such as embryo manipulation and gene expression analysis, to study and explore the developmental processes in various organisms.
ZOO-HC-6026	Evolutionary Biology (including practicals)	1. Explore the principles of evolutionary theory, including natural selection, adaptation, speciation, and phylogenetics. 2. Use comparative methods and molecular techniques to study genetic variation and evolutionary relationships among species.
ZOO-HE-6016	Biology of Insect (including practicals)	1. Study the taxonomy, morphology, physiology, and behavior of insects. 2. Gain practical skills in insect collection, identification, and experimental techniques to study various aspects of insect biology.
ZOO-HE-6026	Fish and Fisheries (including practicals)	1. Understand the diversity, anatomy, physiology, and ecology of fish species. 2. Gain practical knowledge of fishery management, aquaculture techniques, and conservation strategies for sustainable fisheries.
ZOO-HE-6056	Dissertation of Zoology Specific subject	1. Conduct independent research on a specific subject within the field of zoology, demonstrating critical thinking and analytical skills. 2. Produce a well-structured and comprehensive dissertation that presents research findings, interpretations, and conclusions in the chosen subject area.
ZOO-SE-6014	Wildlife Photography and Ecotourism (including practicals)	1. Develop skills in wildlife photography, including techniques for capturing captivating images of animals in their natural habitats. 2. Gain knowledge of ecotourism principles, ethics, and practices, and understand their role in promoting conservation and sustainable development.
ZOO-RE-6016	Aquatic Biology (including practicals)	1. Study the ecology, biodiversity, and adaptations of aquatic organisms in freshwater and marine environments. 2. Gain practical experience in sampling, data analysis, and laboratory techniques related to the

		study of aquatic ecosystems and their conservation.