COURSE OUTCOME DEPARTENT OF ASSAMESE 2023-24



Programme specific Outcome: The Barbhag College is affiliated with Gauhati University and it follows the programme-wise curriculum provided by the university. The Graduate course of Assamese in Assamese Honours and the Regular course deals with the History of Assamese literature and linguistics. The courses of the Assamese department also inculcate the students to acquire knowledge about Assamese culture, its historical background, Assamese folk traditions, diversity of Assamese culture, etc. The course structure of BA in Assamese Honours under CBCS divided into 6 semesters that contains Core papers, Skill Enhancement paper, Ability Enhancement Compulsory Course papers, Discipline-specific Elective papers and generic papers.

The programme will make the students familiarize themselves with the trend and tendencies of early and modern Assamese literature. The Programme will help the students to obtain knowledge about the Origin and Characteristics of the Assamese language, the structure and pattern of Assamese culture, cultural diversity and the unity of Assam. It is expected that the programme will enable to familiarize the students themselves with Indian aesthetics as well as western criticism. The course will provide creative skills and empower the students with communicative skills

Course	Course Outcome
ASS0100104 AXOMIYA BHASHA ARU SAHITYOR ITIHASH (UPTO YEAR 1826)	 Gain knowledge of historical periods of Assamese literature and criticism of its evolution Understand the connection of Assamese literature and language with its neighbors Gain knowledge on characteristics of Medieval era of Sankardeva and Pre- Sankardeva literature Student can develop their knowledge
	regarding Shankari Literature, Post Sankari Literature, Pre Orunodoi period and its background
ASS0200104 Axomiya Bhasha Aru Sahityor Itihash (From Year 1826 To Year 2000)	 Gain knowledge of various trends and branches of linguistics Understand Linguistics phenomena and variety of perspectives Gain knowledge of Eastern and Western literary criticism Understand the difference between Wastern and western literary approach
ASM HC 3016 Asamiya Sahitya Prawesh (Assamese Creative Writings)	 Apart from gaining knowledge student could able to grasp literary test Gain knowledge about Assamese Creative writing like short story, poem, article etc.
ASM HC 3026 Asamiya Kabitar Saneki	The contents of this paper will develop their knowledge regarding many prominent poets of Pre-Sankari and Sankari Era

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	• Learn the concepts of romanticism and remain courter modernism through Assamese poetry
	Pate:-
ASM HC 3036 The Assamese Culture	• Know the social and cultural identity
	• Understand the ethnic identity of various
	tribes and castes of Assam
	• Gain knowledge of Assamese folk culture,
	tradition, Customs, Food habits, rituals, etc.
	Sculpture and architecture
ASH HC 4016 Comparative Indian Literature	Develop knowledge about Comparative
	literature, its definition and various theories
	and trends • Know the unity and diversity of Indian
	literature
	• Identifies the relationship between Indian
	commonality and differences
	• Reading various Short stories and novels from diverse languages and literature will
	enhance their knowledge
ASM HC 4026 Assimilation of Assamese	• Develop knowledge of Indo Aryan
Language	Language family
	• Know the history of the evolution of modern Indian language through various
	stages of Sanskrit, Pali and Prakrit
	languages
	• Know the linguistic similarities of Assamese with other Modern Indian
	Languages
	• Gain knowledge on Sino Tibetan language
	family and various non-Aryan languages of Assam like Tai-Ahom, Bodo, Rabha, Khasi
	etc.
ASM HC 4043 (Assamese Prose)	• Know the characteristics of old asssamese
	prose
	• Understand the development of the different trends of Assamese prose through
	Sankardeva's Dramas and Buranjis(Ahom
A SM 110 5016 (A	Chronicles)
ASM HC 5016 (Assamese Drama and its Style)	 Know the outline of Assamese drama Included selected Assamese dramas of this
	paper will enrich the knowledge of the
	students
ASM HC 5026 (Assamese Grammar)	Gain knowledge about the grammatical
	history of composing grammar in Assam
	• Understand linguistic characteristics of the
	Assamese language
ASM HE 5016 (Assamese Folk Literature)	• Understand the characteristics of Folklore,
	 Folk studies help to develop knowledge of

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	the root of Assamese culture	
ASM HE 5026 (Sankardeva)	• Know the Contribution of Sankardeva to	ARBHAG COL
	Assamese Culture	* EGE
	• Gain knowledge about the creations of	alao Date:-
	Sankardeva	181
	• Extend the knowledge about Kirtanghosa,	Malbari, Phi
	Bargeet, Kabya and Naat of Sankardeva	
	Significance of Sankardeva Ideology	
ASM HC 6016 (Assamese Short Story and Novel)	• Students will obtain knowledge about the	
	trends and tendencies of Assamese short	
	stories and Novels	
	• help the students to find out the cause and	
	factors responsible for the emergence of	
	different trends of Assamese fictional	
	writing	
ASM HC 6026 (Assamese Manuscripts)	• Understand the Origin and development of	
	Assamese manuscripts through different	
	forms	
	• Gain knowledge about different types of	
	old Assamese scripts	
ASM HE 6016 (LakshminathBezbaroa)	• Know the contribution of	
	LakshminathBezbaroa to Assamese	
	Literature	
	• Obtain knowledge about the significance of	
	Bezbaroa's creative writings	
	• Enrich the imagination and creativity of	
	students through Bazbaroa's creative	
	writing and criticism	
ASM HE 6046 (Dialect of Assamese Language)	• Gain knowledge about the various dialect	
	of the Assamese language	
	• Know the linguistic variation of standard	
	Assamese and dialects	
ASM HE 6056 (Project)	• Encourage the student to research and	
	enhance their thinking power	

Colla HOD, Assamese Department Barbhag College ŧ

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COURSE SPECIFIC OBJECTIVES & OUTCOME: HISTORY DEPARTMENT



COURSE SPECIFIC OBJECTIVES AND OUTCOME:

SEMESTER I: HIS0100104 HISTORY OF INDIA (UP TO 1206 CE)

Objectives: The course will also train the students to analyse the various stages of evolution of human cultures and the belief systems in the proto- history period. **Course Outcome**: 1. Students would get multi-disciplinary approach to various disciplines.

- 2. Supportive to civil service, career awareness in Law, Tourism.
- 3. Develop comprehensive thinking and writing skill.
- 4. Develop Patriotism and community consciousness.

Objectives: The paper will be able to relate the connections between the various Bronze Age civilizations in the ancient world as well as development of slave and polis societies in ancient civilizations.

Course Outcome: After the completion of this paper, the students will be able to explain the processes and stages of the evolution of the variety of cultural pattern throughout antiquarian periods in History of the ancient world.

SEMESTER II: HIS0200104 History Of India (1206-1757 Ce)

- **Objectives:** 1. Students would get multi-disciplinary approach to various disciplines.
 - 2. Supportive to civil service, career awareness in Law, Tourism.
 - 3. Develop comprehensive thinking and writing skill.
 - 4. Develop Patriotism and community consciousness.

Course Outcome:

HIS-HC-2026: SOCIAL FORMATIONS AND CULTURAL PATTERNS OF THE MEDIEVAL WORLD

Objectives: This paper is prepared to describe the emergence, growth and decline of various politico-administrative and economic patterns and the resultant changes therein.

Course Outcome: After the completion of this course, the students will be able to analyse and explain the historical socio-political, administrative and economic patterns of the medieval world.

SEMESTER III: HIS-HC-3016: HISTORY OF INDIA III (c. 750 -1206)

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Objectives: The Paper is to analyse India's interaction with another wave of foreign influence and the changes brought in its wake in the between c.700 to 1206 period.



Course Outcome: The completion of this paper will enable the students to relate and explain the developments in India in its political and economic fields and its relation to the social and cultural patterns therein in the historical time period between c.700 to 1206.

HIS-HC-3026: RISE OF THE MODERN WEST – I

Objectives: This course is to explore and analyse the significant historical shifts and events and the resultant effects on the civilizations of Europe in the period.

Course Outcome: On completion of this course, the students will be able to explain the major trends and developments in the Western world between the 14th to the 16th century CE. HIS-HC-3036: HISTORY OF INDIA IV (c.1206 - 1550)

HIS-HC-3036: HISTORY OF INDIA IV (c.1206 - 1550)

Objectives: They will also be able to analyse the sources of history, regional variations, social, cultural and economic set up of the period.

Course Outcome: After completion of this course students will be able to explain the political and administrative history of medieval period of India from 1206 to 1550 AD.

SEMESTER: IV: HIS-HC-4016: RISE OF THE MODERN WEST – II

Objective: This course is aims to relate the circumstances and causal factors of the intellectual and revolutionary currents of both Europe and America at the beginning of the Modern age

Course Outcome: After the completion of this course, the student will be able to explain the political and intellectual currents in Europe in the Modern Age. HIS-HC-4026:

HISTORY OF INDIA V (c. 1550 - 1605)

Objective: The objective of the paper is to describe the inter relationships between the economy, culture and religious practices of political setup in India between c.1550-1605.

Course Outcome: At the completion of this course, the students will be able to analyse the circumstances and historical shifts and foundations of a variety of administrative and political setup in India between c.1550-1605.

HIS-HC-4036: HISTORY OF INDIA VI (c. 1605 - 1750)

Objective: This course aims to relate to the socio-economic and religious orientation of the people of medieval period in India.

Course Outcome: after the completion of this course, the students will be able to explain and reconstruct the linkages of the history of India under the Mughal Rule.

HIS-HC-5026: HISTORY OF INDIA VII (c. 1780 - 1857)

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Objective: The course will also enable the students to analyse popular uprisings among the tribal, peasant and common people against the British policies.

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Course Outcome: After the completion of this course, the students will be able to relate the circumstances leading to the consolidation of colonial rule over India and their consequences. They will also be able to explain the orientation of the indigenous population and the masses towards resistance to the colonial exploitation.

SEMESTER: VI: HIS-HC-6016: HISTORY OF INDIA VIII (c. 1857 - 1950)

Objective: It aims to enable the students to explain the circumstances leading to de-colonization and also the initial period of nation building in India.

Course Outcome: At the completion of this course, the learners will be able to analyse the course of British colonial exploitation, the social mobilizations during the period between c.1857 to 1950 and also the techniques of Indian resistance to British policies.

HIS-HC-6026: HISTORY OF MODERN EUROPE II (c. 1780 -1939)

Objective: The course structure of this paper focuses on the democratic and socialist foundations modern Europe, the students will be able to situate the historical development of working class movements, socialist upsurge and the economic forces of the two wars and the other ideological shifts of Europe in the period

Course Outcome: After the completion of this course, the students will be able to analyse the historical developments in Europe between c.1780 to 1939.

DISCIPLINE SPECIFIC ELECTIVE COURSES:

HIS -HE-5016: HISTORY OF ASSAM (UPTO c. 1228)

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

Course Outcome: After completion of this paper, students will be acquainted with major stages of developments in the political, social and cultural history of Assam during the early times.

HIS -HE-5026: HISTORY OF ASSAM (c. 1228 - 1826)

Objective: This paper will enable the student to explain the history of Assam from the 13th century to the occupation of Assam by the English East India Company in the first quarter of the 19th century.

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

HIS -HE-6016: HISTORY OF ASSAM (c. 1826 – 1947)

Objective: The course would enable the students to analyse the main currents of the political and socioeconomic developments in Assam during the colonial period.

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Course Outcome: Upon completion of this course, students will be able to describe the period of British rule in Assam after its annexation by the imperialist forces. They will also be able to situate the development of nationalism in Assam and its role in India's freedom struggle.

HIS -HE-6026: ASSAM SINCE INDEPENDENCE

Objective: They will also be able to identify the main currents of political and socio-economic development in Assam after India's independence and the causes and impact of various struggles and movements in contemporary Assam.

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Course Outcome: Students will be able to assess the aftermath of Partition and other socio- economic developments in post-independence Assam upon completion of this course.

Generic Elective Courses

HIS -HG-1016: HISTORY OF INDIA (FROM THE EARLIEST TIMES UP TO c. 1206)

Objective: The objectives of this paper to understand the changes and transformations in polity, economy and society in early India and the linkages developed through contacts with the outside world.

Course Outcome: Upon completion of this course, students will be able to explain the emergence of state system in North India, development of imperial state structure and state formation in South India in the early period.

HIS -HG-3016: HISTORY OF INDIA (c. 1757 to 1947)

Objective: The paper aims to identify the process of growth of resistance against British colonial rule and the eventual growth of Indian nationalist movement, which ultimately led to the end of the British rule in the country.

Course Outcome: Upon completion of this course, students will be able to understand the major factors that led to the establishment and consolidation of British rule in India.

HIS -HG-4016: SOCIAL AND ECONOMIC HISTORY OF ASSAM

Objective: The paper aims to analyse socio economic history of Assam.

Course Outcome: Upon completion of this course, students will be able to analyse and explain the socioeconomic history of Assam including among others the development of caste system, religious beliefs, agriculture and land system, the social organization, trade and commerce, various agricultural regulations, plantation economy, development of modern industries, transport system, education, the emergence of middle class, development of literature and press, and growth of public associations.

Skill Enhancement Elective Courses

HIS -SE-3014: Historical Tourism in North East India

Objective: The paper relates to understand the growing vocation of tourism as an industry and the applicability of historical knowledge for its growth.

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Course Outcome: After completing this course, students will be able to explain Tourism in North East India with special reference to the historical monuments, cultural and ecological elements and places of the north east India country as tourist and heritage sites of the nation.

HIS -SE-4014: Oral Culture and Oral History

Objective: The aim of this paper is to use 'Public memory' as a tool and a source not only to write public history but also to explore new knowledge in the humanities, social sciences and even in disciplines like architecture, communication studies, gender studies, English, history, philosophy, political science, religion, and sociology.

Outcome: After this course the students will be able to explain complex interrelationships of structures or events in the context of broader social and cultural framework of societies through 'public memory' and use oral history to preserve oral culture and local history The students will be able to espouse the relevance to the north-eastern region of India with its diverse culture and ethnic communities whose history is largely oral.

Programme specific outcome: History

The curriculum of the history department includes a systematic follow up of the CBCS syllabus and also the inclusion of all possible flexible means of teaching learning process. The overall curriculum is divided into six semesters which includes the core courses like the *study of Indian history, study of the modern west*. It also includes discipline elective specific courses (DSE) such as the History *of Assam* and skill enhancement courses like *Historical tourism in North east India* and *oral culture and oral history*. The whole programme has provides some outcome, such as---

- 1. Students would get multidisciplinary approach to various disciplines.
- 2. Knowledge of human civilization broadens their mind and increased analytical capacity.
- 3. It gives the students about the present day problem.
- 4. The subject is very helpful for various civil service examinations, creates career avenues in law, tourism, mass communication, social welfare etc..
- 5. The subject builds empathy through studying the life of people, nations and their struggle.
- 6. It helps in building up of citizenship with the knowledge of own identity
- 7. Develop comprehensive thinking and writing skill.
- 8. Develop critical thinking and farsightedness.
- 9. It develops patriotism and community consciousness.

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DEPARTMENT OF ENGLISH BARBHAG COLLEGE <u>Programme Outcomes</u>



The undergraduate Arts English programme will offer the students ample opportunity and adequate scope for gaining knowledge of the vast sphere of English literature from the very beginning up-to the modern times and acquaint the students with the currents and cross-currents of English literature of different ages. The programme will enable the students to develop their reading, writing and speaking skills the language. It provides an extended opportunity which enables an exposure to some other disciplines/subjects and nurtures the candidate's proficiency and skill. Various courses of English will help the students to acquire special/advanced knowledge in the fields of literature and language studies. The main concern of different courses is to provide up-to-date knowledge in English, so that, the students are be able to adjust themselves to different changing situations. The programme by and large aims at enhancing practical knowledge of the students' regarding the English language and also to providing hands-on-training, competencies, skills etc.

Programme Specific Outcomes: in English:

B.A. Honours in English:

(i) The honours programme introduced in the syllabus offers a rich and diverse canvas that spans across genres like drama, poetry, the epic narrative as well as short fictional fables.

(ii) The honours programme will give enough scope to students to familiarize themselves with the enriching literary tradition of the classical period.

(iii) The papers on Indian writing in English introduces students to the historical development of this body of writing the challenges faced by writers and the interpretation of individual and collective experience in colonial and postcolonial India.

(iv)The honours programme will familiarize the students with the major forms in British literature, from the 14th to the 20th Century, - poetry, drama, novel, short stories, biographies, autobiographies etc.

(v) The B.A. Honours programme will help students to acquire a sense of the historical development of each literary form. The students will be able to learn to analyze texts as representative of broad generic explorations.

(vi) The Programme will acquaint the students with the main currents of American literature in its social and cultural contexts.

(vii) The selected texts will encourage the students to look at the economic, political, and social changes in Britain during different periods.

(viii) The programme will introduce the students with major currents and cross- currents of English literature thereby helping them to gather different ideas about the relationship between humans and nature.

(ix) The programme will enable the students to acquaint themselves with ethos of Postmodernism through a reading of recent poetic and fictional works.

B.A. (English) Regular:

(i) The regular programmes In English will provide the students an opportunity to read and respond to representations of issues in contemporary life and culture in the English language.

(ii) It will give ample opportunity to the students to speak and write the English language fluently.

(iii) It will help the students to understand the relationship between the individual writer and the society in which he/she writes.

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(iv) This programme will enable the student to develop skill in analyzing the authors' representation of the society.

BA English (Honours) Course Specific Outcomes:

Paper 1 ENG0100104 ENGLISH LITERARY AND SOCIAL HISTORY	This paper introduces students to a selection of literatures of India in English translation. Given that Indian Classical Literature offers a rich and diverse canvas that spans across genres like drama, poetry, the epic narrative as well as short fictional fables, to name a few, it is essential that students studying English literature are familiar with at least a few of these. This paper encourages students to think laterally about literatures of the world, and the possibility of cultural exchange.
Paper 2 ENG0200104 Forms, Genres And Concepts Of English Literature	Classical writing in Europe saw the emergence of traditions that cut across many genres, which included poetry, theatre, and general discourses. While the Aristotelian focus on the examination of the essentials of poetry extended to incorporate discussions on epic and drama, subsequent writers such as Horace drew attention to the purposefulness of the creative exercise. In the theatre the widely divergent compositions by Sophocles and Plautus respectively show the consolidation of a rich cultural discourse. It is this enriching literary tradition that this paper seeks to familiarize with through the study of representative texts belonging to the Classical Period.
Paper-3, ENG-HC-2016	This course develop students familiarity with the issues of politics of language and gender, nationalism and modernity pertaining to pre and post-Independence India that have been responsible for the emergence of Indian English literature • Understand the place of English Writing in India in the larger field of English Literature • Learn to discuss critically the use of literary forms of the novel, poetry and drama by Indian English writers in distinctive ways against Indian historical and cultural context
Paper-4, ENG-HC-2026	This paper will familiarize the students with the two major forms in British literature from the 14th to the 17th centuries – poetry and drama, apart from acquainting them with the contexts that generated such literatures. The larger contexts of the Renaissance, the nature of the Elizabethan Age and its predilections for certain kinds of literary activities, and the implications of the emergence of new trends will be focused in this paper. It will also highlight the seminal issues and preoccupations of the writers and their ages as reflected in these texts.
Paper-5, ENG-HC-3016	This paper acquires a sense of the historical development of each literary form and gains understanding of the contexts in which literary forms and individual texts emerge. It helps to learn to analyze texts as representative of broad generic explorations.
Paper-6, ENG-HC-3026	This paper acquaints the students with the main currents of American literature in its social and cultural contexts. The texts incorporated in the paper are a historical reflection of the growth of American society and of the way the literary imagination has grappled with such growth

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Paper-7, ENG-HC-3036	and change. A study of the paper, hence, should lead to an acquaintance with the American society in its evolutionary stages from the beginnings of modernism to the present as well as with exciting generic innovations and developments that have tried to keep pace with social changes This paper familiarizes the students with British literature in the 17th
	and 18th centuries, a time-period which sees the emergence and establishment of greatly diverse kinds of writings. The selected texts may encourage the students to look at the economic, political and social changes in (primarily) Britain during this period, such as the shifts from the Puritan Age to the Restoration and Neoclassical periods. The paper also seeks to familiarize the students with the larger contexts that generated such literatures as well as the possible impacts of the literature on society. The significance of the scientific revolution during this period may also be studied in relation to the literary productions.
Paper-8, ENG-HC-4016	This paper help students to understand the nineteenth century Romantic imagination, expressing itself most memorably in the poetry of Blake, Burns, Wordsworth, Coleridge, Shelley, and Keats. The poetry of the age fashions itself partly in revolt to the spirit of the previous age, with very different ideas about the relationship between humans and nature and the role of the poet taking hold. This paper includes selections from works of major Romantic poets which address these issues, enabling students to appreciate the essence of the Romantic vision.
Paper-9, ENG-HC-4026	The texts chosen in this paper will expose the students to the ground- breaking efforts of the poets as well to the works of fiction writers who manage to consolidate and refine upon the achievements of the novelists of the previous era. Austen to Rossetti represents a remarkable literary development and range of works, addressing a very diverse array of social preoccupations.
Paper-10, ENG-HC-4036	The works of the writers chosen for this paper are good introductions to the spirit of modernism, with its urgent desire to break with the codes and conventions of the past, experiment with new forms and idioms, and its cosmopolitan willingness to open itself up to influences coming from other shores. The paper goes beyond the High Modern period of the early century and the students will also get acquainted with the ethos of postmodernism through a reading of recent poetic and fictional works.
Paper-11, ENG-HC-5016	This paper directs the students' attention to nineteenth and twentieth century writings by women living in different geographical and socio cultural settings. Students will get acquainted with the situationally distinct experiences of women articulated in a variety of genres-poetry, novels, short stories, and autobiography, while the selections from Mary Wollstonecraft-the only 18th century text prescribed, will acquaint students with the ideas contained in one of the earliest feminist treatises of the western world. Apart from an examination of the themes and styles in the prescribed texts, students will be required

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	to engage themselves with the specificities of the contexts from which
	the texts emerged and also analyze the women writers' handling of the
	different genres to articulate their women-centric experiences. Themes:
	Gender sexual/textual politics feminism body identity class
	location voice space gender and parrative
Paper-12 ENG-HC-5026	The paper introduces the students to the innovative dramatic works of
	playwrights from different locations in Europe, which taken together
	represents the wide range of modern drame and its fortunes on the
	written page and the stage. The selected plays would allow an
	understanding of the emergence of event garde movements and trends
	and dramatic devices and techniques during the period of modernism
	which eventually influenced theatricel prostices in other notions of the
	which eventually influenced meanical practices in other harons of the
	WORL.
Paper-13, ENG-HC-6016	This paper gives the students an opportunity to acquaint themselves
	with some of the novels, short stories and poems from postcolonial
	interatures across the world, with the texts snowcasing the many
	regional, cultural differences and peculiarities, as well as common and
	shared experiences of the postcolonial condition.
Paper-14, ENG-HC-6026	This paper highlights the nature of 'popular' literature as a genre and
	the critical ideas underpinning the theorization of popular literature.
	This will be done through a practical engagement with various texts
	falling under its ambit.
Eng-HE- 5036	This paper will provide the scope for looking at the diasporic
	experience with particular reference to Indian diasporic writers.
ENG-HE-5056	This paper familiarizes the students with some important texts on
	literary criticism and literary theory. Beginning from William
	Wordsworth's Preface to the Lyrical Ballads the purpose will be to
	inform the students on the shifts in literary interpretations and critical
	approaches so as to equip them while reading texts across genres.
ENG-HE-6046	This paper will provide knowledge on travel writing and ethnography,
	gender and travel ,globalization and travel, travel and religion,
	orientalism and travel
ENG-he-6066	This paper provide knowledge on the key concepts like the folk in
	narrative, myths and legends, memory and telling, writing northeast
	India etc.

(v) The regular programme in English will provide sufficient knowledge of poetry ranging from the pre-romantic period up to the modern times. It also helps the students to gain knowledge about English Grammar.

B.A. Eng (Regular) Course Specific Outcomes

ENG-CC-1016	This paper will provide the students an opportunity to read
	and respond to representations of issues in contemporary
	life and culture in the English language
Eng-CC-1026	This paper will enable the students to acquire knowledge
	about the trends of English Romantic poetry, some
	speciments of Indian Englisg Poetry and English Poetry as
	whole from the pre-Romantic period to the Modern times.

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HOD, ENGLISH HOD, College, Kalen Banting College, Kalen

DEPARTMENT OF PHYSICS

Programme Outcome: (BSc General)



- Acquire adiquate knowledge of the subject.
- Craft a foundation for higher learning.
- Develop capacity of critical reasoning, Judgement and communication skills.
- Learn to use computers and various software.
- Learn to tolerate diverse ideas and different points of view.
- Become empowered to face the challenges of the changing Universe.

Programme Specific Outcomes: (B.Sc Regular with physics)): This programme in physics would provide the following opportunities to the students.

- To understand the fundamental principles, concepts and recent developments in Physics.
- To carry out experiments to understand the various laws and concepts in physics.
- To inspire and boost interest of the students in physics.
- To develop the power of appreciations, the achievements in science and role in nature and society.
- To apply the theories learnt and the skills acquired to solve the real life problem.
- To enhance the academic abilities, personal qualities and transferable skills so that the students will get the opportunities to get jobs in various fields.
- To become a person with analytical mind, innovative thinking, clarity of thought, expression and systematic approach.

Semeste	Code of the	Name of	Course Outcome
r	paper	the paper	
First semester	PHY0100104	MATHEM ATICAL PHYSICS AND MECHANI CS	After 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 and 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 handling measuring instruments (like screw gauge, Vernier calipers, travelling microscope.) students shall embark on verifying various principles and associated measurable parameters.
Second semester	PHY 0200104		After completion of this course, students are expected to apply Gauss's Law of Electrostatics to solve a variety of problems,

Course Specific Outcome:

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		Mathematic	calculate the magnetic forces that act on moving charges and
		al Physics	the magnetic fields due currents have brief idea of magnetic
		&	materials understand the concepts of induction and apply them
		Electricity	to solve variety of problems
		And	In the laboratory course students will be able to measure
		And	resistance (high and low) voltage current self and mutual
		Magnetism	inductance capacitor strength of magnetic field and its
			variation and to study different circuits RC LCR etc
	DHV PC 2016	Thermal	After completion of this course, students are expected to learn
	/ DUV UC	nhysics and	the basic concents of thermodynamics, the first and second of
	2016	statistical	law of thermodynamics, the concept of entropy and the
	3010	machanica	law of thermodynamics, the concept of entropy and the
		mechanics.	associated medicinis, the mennodynamic potentials and then physical interpretations. Maxwell's thermodynamic relations
			fundamentale of the kinetic theory of good Maxwell
			Poltzman distribution law equipartition of operation man free
			boltzman distribution law, equipartition of energies, mean nee
Thind			diffusion and Drownian motion black body rediction
annastar			Stanhan Poltzman's Law Payloigh Joan's Law and Dianel's
semester			Stephen-Doltzman's Law, Rayleign-Jean's Law and Flanck's
			viz the Rose Einstein Statistics and the Formi Dirac
			Statistics
			In the laboratory course, students will be able to measure.
			Planek's constant using black body rediction determine
			Stanban's constant as afficient of thermal conductivity of a
			bad-conductor and a good conductor determine the
			temperature coefficient of resistance study variation of thermo
			emf_across two junctions of a thermocouple with temperature
			etc
	PHY-SE-3054	Video	After completion of this course students will be able to edit
		editing for	impactful video content which appeals to target audience add
		Social	or edit music soundtrack or audio to videos to customize the
		Media	videos by using Text (font) and to use transitions and effects to
		iviculu.	create impactful videos
Fourth	PHY-RC-4016	Waves and	After completion of this course students are expected to
semester	/ PHY-HG-	Optics	understand simple harmonic oscillation and superposition
semester	4016	opties	principle importance of classical wave equation in transverse
	4010		and longitudinal waves and solving a range of physical
			systems on its basis 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 students will gain hands on
			experience on use of various optical instruments and making
			of finer measurements of wavelength of light using Newton
			Ring's experiment. Fresnel biprism, etc., resolving nower of
			optical equipment, the motion of coupled oscillators, and study
			of Lissajous figures and behavior of transverse. longitudinal
			waves.

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	PHY-SE-4034	Domestic and Industrial Electrical Wiring	After successful completion of this course students will be able to recognize various electrical devices and their symbols, recognize various electrical devices placed on the panels/ distribution boards and to design the panels, read schematic and wiring diagrams of electrical devices, read and interpret electrical installation plan, practice and execute any type of wiring, estimate and determine the cost of wiring installation.
Fifth semester	РНҮ-НЕ-5056	Nuclear and Particle Physics	After completion of this course, students will have the understanding of the subatomic particles and their properties, about the different nuclear techniques and their applications in different branches of physics. The course will develop problem based skills and make the students to apply the acquired knowledge in the areas of nuclear, medical, archeology, geology and other inter-disciplinary fields of physics and chemistry.
	PHY-SE-5044	PageMaker	After completion of this course, students will be able to create Documents and Templates, add Text into documents using various methods, and applying different formatting styles to characters and paragraphs, import graphics, create objects using various tools, add effects to objects create a book and export it into PDF, Multipage Layout Design.
Sixth semester	PHY-HE-6056	Classical Dynamics	After completion of this course, students will have an overview of Newton's Laws of Motion, Special theory of Relativity by 4-vector approach and fluids and to make the students understand the Lagrangian and Hamiltonian of a system.
	PHY-SE-6044	Graphic Design for Digital Advertising	After completion of this course, students will be able to understand aesthetics & visual appeal in design, use of impactful visual content which appeals to target audience, conceptualize, visualize, and create graphic design for Digital Adds, Posters .Banners and Flyers, Social Media Adds & banners, Website and Blogs.

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Read of the Deptt-of Physics Berbhar College, Nalbari (Assam)

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POLITICAL SCIENCE COURSE OUTCOMES B.A. HONOURS COURSE



SL	PAPER NO & TITLE	COURSE OUTCOMES
NO		
1	POL0100104 INTRODUCTION TO POLITICAL THEORY	 After completing the course students will be better equipped to understand the key concepts in political theory and various related conceptual categories. They will also be in a better position to engage in application of concepts and understand the limitations. It will also help in developing critical thinking regarding the functioning of the political system in relation to the context the students are situated in. The foundation for understanding the contemporary political developments would also be laid down by the course
2	POL0200104 Indian Government And Politics	 Students will develop an understanding of the legacy of national movement and the principles that shaped the formation and functioning of the Constituent Assembly of India. It will help in developing critical thinking about role of ideas and norms in shaping democracy in India. It will make them understand what is constitution and how has the working of contributed to the consolidation of democracy in India. Students will be able to make sense of the institutional design, challenges and resilience marking key public institutions in India.
3	POL HC 3016 Introduction to Comparative Government and Politics	 To make students understand the basic concepts in comparative politics, To make students classify the different political systems and historical context of modern governments, To enable students to have a comparative analysis of countries related to their political institutions and behaviour.
4	POL HC 3026 PERSPECTIVES ON PUBLIC ADMINISTRATION	 To enable students to learn the basic concepts related to public administration and its importance, 7To make students learn the major theories of

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		public administration,
		• To enable students to have an understanding of public policy and its formulation,
		• To familiarize students with the major
		approaches and recent debates related to field of public administration
5	POL HC 3036 Perspectives on International	• To make students understand the key theoretical approaches in International
	Relations and World History	relations,
		• To familiarize students with the evolution of International state systems and its importance
		 To make students aware of the key theoretical
		debates in International relations
		• To enable students to have an overall understanding of International relations in
		relation to twentieth century IR history.
6	Political Processes and	• To understand, comprehend and analyse the complex nature and functioning of the political
	Institutions in Comparative	systems, political institutions and
	reispective	specific case of India and cross-country
		perspectives.
		• To demonstrate critical trinking about key issues of political system of different forms,
		political process and public policy.
		• To use the contents and sub-units of the course as vardsticks for comparing these political
		systems and processes.
7	POL HC 4026	• To student familiarise with and gain
/	PUBLIC POLICY AND	knowledge about the processes of public policy
	ADMINISTRATION IN INDIA	making in India and their significance in administering the state.
		• To develop the ability to assess the functioning
		of the government and the administration in
		administration in India.
8	POL HC 4036	• To enable students to understand how to
	Global Politics	approach a wide range of important global political and economic policy problems and
		participate in public policy debates on the
		 crucial issues facing the world today. To have knowledge of the essential theoretical
		assumptions underlying globalisation's
		conceptual frameworks and their relationships to policy interventions.
		To demonstrate elementary knowledge of

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		major issues and subject-matters surrounding globalisation that decides the international relations- political, economic and security relations- among the nations.
9	POL HC 5016 Classical Political Philosophy	 To interpret ideas underlying traditions in classical political philosophy To analyse the debates and arguments of leading political philosophers belonging to different traditions of the period
		• To appraise the relevance of classical political philosophy in understanding contemporary politics
10	POL HC 5026 Indian Political Thought-I	• To underline themes and issues in political traditions of pre-colonial India.
		• To compare and contrast positions of different political traditions those were present in pre-colonial India.
		• To evaluate the relevance of political thought of pre-colonial India for contemporary politics.
11	POL HC 6016 Modern Political Philosophy	• To interpret ideas underlying traditions in modern political philosophy
		• To analyse the debates and arguments of leading political philosophers of different philosophical traditions
		• To appraise the relevance of modern political philosophy in understanding contemporary politics
12	POL HC 6026 Indian Political Thought-II	• To underline themes and issues in political thought of modern India.
		• To compare and contrast positions of leading political thinkers in India on issues those are constitutive of modern India.
		• To assess the relevance of political thought of modern India in understanding contemporary politics.
13	POL SE 3014 PARLIAMENTARY PROCEDURES AND	• To help students in understanding the practical approaches to legislatives practices and procedures.
	PRACTICES	• To make students understand the procedures and processes related to drafting a Bill and the passage of the Bill.
		 To enable students to have an understanding of the importance of Parliamentary Committees. To make students learn about the basic functioning of Parliament
14	POL SE 3024 YOUTH AND NATION- BUILDING	 To enable students to learn the importance of youth in NSS and NCC.

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		• To make students understand the activities related to NSS and NCC and its importance
		• To make students learn the basics of National Disaster Management and its importance.
15	POL SE 4014: Panchayati Raj in Practice	 This paper will help students understand the importance of grass root political institutions in empowering people. This paper will highlight the complex challenges faced by PRIs in India and mechanisms involved to make it more participatory and inclusive in nature.
16	POL SE 4024 CITIZEN AND RIGHTS	 To analyse the linkages between citizenship, law, rights and equality To understand the measures of discrimination, justice and empowerment and the ways to protect the same. To evaluate the idea of justice and assess its relevance in context of contemporary India.
17	POL HE 5016 HUMAN RIGHTS	 To interpret ideas underlying traditions in classical political philosophy To analyse the debates and arguments of leading political philosophers belonging to different traditions of the period To appraise the relevance of classical political philosophy in understanding contemporary politics
18	POL HE 5026 Public Policy in India	 To be familiarised with and gain knowledge about the processes of public policy making in India To assess the functioning of the government and the administration in ensuring a citizen centric welfare administration in India.
19	POL HE 5036 Understanding Global Politics	 To describe the key concepts underlying the idea of world order and their historical evolution. To comprehend diverse approaches to understand global political and economic problems. To demonstrate relevance of international actors in understanding world politics.
20	POL HE 5046 Select Constitutions	 Students will be able to understand the importance of constitutions. This paper is an integral part of public services examinations. Students will be introduced to the various

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		types of constitutions and the forms of governments from different parts of the world.
21	POL HE 6016 India's Foreign Policy in a globalizing world	 To underline the issues in India's foreign policy To evaluate the impact of global development on India's foreign policy To demonstrate the change and continuity that marks India's foreign policy.
22	POL HE 6026 Understanding South Asia	 To identify geo-political and historical construction of South Asia as a region. To analyse the politics and socio-economic issues of the South Asian Region. To assess the relevance of regionalism in South Asia and India's position in the region.
23	POL HE 6036 Women, Power and Politics	 To explain key concepts that offers an understanding of gender inequality. To appraise the historical evolution of the Women's movement in India and issues addressed by it To underline the contemporary issues that affect women's participation in politics.
24	POL HE 6046 Social Movements in North- east India	 To introduce the students with the social movements of the North-East India and nature of these. To engage them with historical development of such social movements To understand the new social movements of the region
25	POL HG 1016 Introduction to Political Theory	 To introduce the key concepts in political theory To make students understand the aspects of conceptual analysis To engage the students in application of concepts and their limitations
26	POL HG 1026 Politics In North-East India	 To introduce the students with the region and nature of its politics To engage them with historical development of the region To understand the contemporary developments of the region
27	POL HG 1036 Governance: Issues And Challenges	 To introduce major concepts and debates of Governance To enable the students to relate governance with globalization, environment and development To make students explore good governance initiatives in India

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28	POL HG 2016	•	Appreciate the approaches to the study of
	Indian Government and		Indian politics and the changing nature of the
	Politics		state
		•	Understand the basic features of the Indian
			constitution and its institutional functioning
			To avaming the changing role of casta class
		•	and netrierably and their impact on politics
			and participation and then impact on pointes
		•	To understand the dynamics of social
			movements in India.
29	POL HG 2026	•	This course on gender studies will open up the
	Feminism: Theory and		structural and institutional basis of patriarchy
	Practice		as well as establish that gender identity and
			gender injustice cannot be understood in
			isolation, but only with reference to caste, class
			and religious community identities.
		•	To understand the history of feminism and its
			origins in different parts of the world
		•	To appreciate the Indian Women's Movement
			and its role in foregrounding important issues
			relating to women's position in the society,
			economy and polity
30	POL HG 2036	•	To understand the historical evolution of local
	Local Rural And Urban		governance in India
	Governance	•	To understand the working of rural and urban
			governance in India
		•	To understand the workings of committees and
			commissions associated with local governance
31	POL HG 3016	•	To make students have a basic understanding
51	Comparative Government		of comparative political analysis.
	and Politics	•	To make students learn the classification of
			political systems from a comparative politics
			framework.
		•	To make students learn the classification of
		•	governments and the political behaviour of
			institutions and the changes in the nature of the
			nation state
20	POL HC3026	-	To make students understand relevance of
52	Candhi and the	•	Gandhi and his philosophy in modern times
	Contemporary World	_	To familiarize students with Condhian
		•	ideology and leadership
		-	To make atydants loom Countly'
		•	to make students learn Gandni's critique on
			The first state of the state of
		•	10 make students understand Gandhi's
			political strategy and philosophy.
33	POL HG 3036	•	To make students learn the importance of
	United Nations And Global		United Nations as an organization
	Conflicts	•	To enable students to have a basic
			understanding of the political processes of the

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		 United Nations To make students to learn the relevance of United Nations and its intervention in global conflicts critically
34	POL HG 4016 Introduction to International Relations	 To demonstrate basic understanding of scientific methods of inquiry in international relations. To understand how international relations influence societies. To demonstrate a basic understanding of the foundational theories and concepts in international relations. To analyse the current world events and their implications on the Indian Foreign policy decision making process by applying prominent theories of international relations and generate substantial research question on the topics.
35	POL HG 4026 Understanding Ambedkar	 To analyse Ambedkar's views on caste, class, religion, nationalism, gender and constitutional democracy. To understand contribution of Ambedkar to political thought in modern India. To evaluate political ideas of Ambedkar and assess its relevance in context of contemporary politics.
36	POL HG 4036 Politics of Globalization	 To analyse the historical evolution of globalisation. To understand social, economic, cultural and political impact of globalisation. To evaluate the idea of globalisation and assess its relevance in context of contemporary politics.

B.A. REGULAR COURSE

SL NO	PAPER CODE AND TITLE	COURSE OUTCOMES
1	POL0100104 INTRODUCTION TO POLITICAL THEORY	 After completing the course students will be better equipped to understand the key concepts in political theory and various related conceptual categories.
		 After reading the course the student will be able to Appreciate the approaches to the study of

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2	POL0200104 Indian Government And Politics	 The paper aims at introducing students to the nature, emergence and functioning of the Constitution of India. The paper seeks to impart learning on the significance of the idea of citizenship and rights and how has constitution incorporated them and what does it reflect on the nature of Indian constitution.
3	POL RC 3016 Comparative Government and Politics	 To make students have a basic understanding of comparative political analysis, To make students learn the classification of political systems from a comparative politics framework. To make students learn the classification of governments and the political behavior of institutions and the changes in the nature of the nation-state.
4	POL SE 3014 Parliamentary Procedures and Practices	 To help students in understanding the practical approaches to legislatives practices and procedures, To make students understand the procedures and processes related to drafting a Bill and the passage of the Bill, To enable students to have an understanding of the importance of Parliamentary Committees, To make students learn about the basic functioning of Parliament.
5	POL SE 3024 Youth and Nation-Building	 To enable students to learn the importance of youth in NSS and NCC, To make students understand the activities related to NSS and NCC and its importance, To make students learn the basics of National Disaster Management and its importance.
6	POL RC 4016 Introduction to International Relations	 To demonstrate basic understanding of scientific methods of inquiry in international relations. To understand how international relations influence societies. To demonstrate a basic understanding of the foundational theories and concepts in international relations. To analyse the current world events and their implications on the Indian Foreign policy decision making process by applying prominent theories of international relations and generate substantial research question on the topics.
7	POL SE 4014: Panchayati Raj in Practice	• This paper will help students understand the importance of grassroot political institutions in empowering people.

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		• This paper will highlight the complex challenges faced by PRIs in India and
		participatory and inclusive in nature.
8	POL SE 4024 Citizens and Rights	 To analyse the linkages between citizenship, law, rights and equality To understand the measures of discrimination, justice and empowerment and the ways to protect the same. To evaluate the idea of justice and assess its relevance in context of contemporary India
9	POL SE 5014 Public Opinion and Survey Research	 This course will introduce the students to the debates, principles and practices of public opinion polling in the context of democracies, with special reference to India. It will familiarize the students with how to conceptualize and measure public opinion using quantitative methods, with particular attention being paid to developing basic skills pertaining to the collection, analysis and utilization of quantitative data.
10	POL RE 5016 Public Administration-I	 Students will be able to understand the basics of public administration; This paper is an integral part of public services examinations. Students will be well versed with ideas of administration.
11	POL RE 5026 Select Constitutions-I	 Students will be able to understand the importance of constitutions; This paper is an integral part of public services examinations. Students will be introduced to the various types of constitutions and the forms of governments from different parts of the world.
12	POL RG 5016 Public Administration-I	 Students will be able to understand the basics of public administration; This paper is an integral part of public services examinations. Students will be well versed with ideas of administration.
13	POL RG 5026 Democracy in India	 Students will be able to understand the importance of freedom movement in India; Students will be introduced to the various types of constitutions and the forms of governments from different parts of the world. The debates on the nature of Indian democracy will provide an important insight to the complex nature of challenges faced by the state and different public institutions.
14	POL SE 6014 Conflict and Peace Building	• This course is designed to help build an understanding of a variety of conflict situations among students in a way that they can relate to

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		 them through their lived experiences. It's an interdisciplinary course that draws its insights from various branches of social sciences and seeks to provide a lively learning environment for teaching and training students how to bring about political and social transformations at the local, national and international levels. The course encourages the use of new information technologies and innovative ways of understanding these issues by teaching students skills of managing and resolving conflicts and building peace through techniques such as role-play, simulations, street theatre, cinema and music on the one hand and by undertaking field visits, interacting with different segments of the civil
		society including those affected by conflicts as well as diplomats, journalists and experts, on the other.
15	POL RE 6016 Public Administration –II	 After reading this course the students will be in a position acquaint with the different layers and structures of public administration and also to know how public administration contributes towards development. One will also be in a position to know about the principles and processes of budgeting etc.
16	POL RE 6026 Select Constitutions -II	 Students will be able to understand the importance of constitutions; This paper is an integral part of public services examinations. Students will be introduced to the various types of constitutions and the forms of governments from different parts of the world.
17	POL RG 6016 Public Administration –II	 After reading this course the students will be in a position acquaint with the different layers and structures of public administration and also to know how public administration contributes towards development. One will also be in a position to know about the principles and processes of budgeting etc.
18	POL RG 6026 Indian Administration	• After reading this course a student will be in a position to acquaint him/her with the process of evolution of Indian administration and also different layers and structures of the administration.

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Baintre. HOD Department of Political Science Barbhag College

PROGRAMME SPECIFIC OUTCOMES

Programme specific outcomes of Political Science are:

• To understand and learn humanities at its core for the knowledge surrounds

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- To understand the nature and developments in state, national and international politics.
- To analyze the Indian Constitutional provisions, major legislations and reforms.
- To form critical evaluation of social, economic and political variables for a proper understanding of the plurality of Indian society.
- To build overall consciousness regarding national political history, international relations and present Indian and western political thinkers.
- To encourage a comprehensive, comparative understanding of political structures and constitutions of developed and developing countries.
- To develop knowledge of administrative studies with special reference to Indian administrative structures and practices.
- To examine India's foreign relations with her neighbors and great powers.

DEPARTMENT OF CHEMISTRY BARBHAG COLLEGE



1. **Programme Outcome**

B.Sc Regular with Chemistry & Chemistry as Generic Elective

i) Students will build a firm foundation in current chemical and scientific theories including those in Inorganic, Organic and Physical Chemistry, Polymer Chemistry etc.ii) Students will be able to explore new areas of research in both Chemistry and allied fields of science and technology.

iii) They will have farm knowledge how to build the ability to explain why chemistry is an integral activity for addressing social, economic and environmental problems.

iv) The Students will build the skill of problem solving, critical thinking and analytical reasoning as applied to chemistry related problems

2. Programme Specific Outcome:

a) **<u>B.Sc Honours in Chemistry</u>**

- i) Students will develop broad knowledge in Chemistry in addition to understanding of chemical concepts, principles and theories.
- ii) Students will be qualified for admission into post graduate course and other related course in Chemistry.
- iii) They will improve the ability and skill to acquire knowledge for solving of both theoretical and applied Chemistry problems.
- iv) Student can build up their career as Chemists in various chemistry related fields.

3. Course Outcome

a) **B.Sc Honours in Chemistry**

Semester	Paper Code/	Course outcome
	Name	
B.Sc 1 st Semester	CHE0100104 CHEMISTRY I	understanding of the concepts related to atomic and molecular structure, chemical bonding, periodic properties and redox behaviour of chemical species. Students will also have hands on experience of standard solution preparation in different concentration units and learn volumetric estimation through acid-base and redox reactions. In gaseous state unit the students will learn the kinetic theory of gases, ideal gas and real gases. In liquid state unit, the students are expected to learn the qualitative treatment of the structure of liquid along with the physical properties of liquid, viz, vapour pressure, surface tension and viscosity. In the molecular and crystal symmetry unit they will be introduced to the elementary idea of symmetry which will be useful to understand solid state chemistry and group theory in some higher courses. In solid state unit the students will learn the basic solid state chemistry application of x-ray crystallography for the determination of some very simple crystal structures. The students will also learn another important topic "ionic equilibra" in this course .

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B.Sc 2 nd Semester	CHE0200104 Chemistry II	Students will be able to identify different classes of organic compounds, describe their reactivity and explain/analyze their chemical and stereo chemical aspects. In this course the students are expected to learn laws of thermodynamics, thermo chemistry, thermodynamic functions, relations between thermodynamic properties, Gibbs Helmholtz equation, Maxwell relations etc. Moreover the students are expected to learn partial molar quantities, chemical equilibrium, solutions and colligative properties. After completion of this course, the students will be able to understand the chemical systems from thermodynamic point of view
B.Sc 3 rd Semester	CHE-HC-3016: INORGANIC CHEMISTRY-II CHE-HC-3026:	On successful completion of this course students would be able to apply theoretical principles of redox chemistry in the understanding of metallurgical processes.Students will be able to identify the variety of s and p block compounds and comprehend their preparation, structure, bonding, properties and uses. Experiments in this course will boost their quantitative estimation skills and introduce the students to preparative methods in inorganic chemistry. Students will be able to describe and classify organic
	ORGANIC CHEMISTRY-II	compounds in terms of their functional groups and reactivity.
	CHE-HC-3036: PHYSICAL CHEMISTRY-III	The students are expected to learn phase rule and its application in some specific systems. They will also learn rate laws of chemical transformation, experimental methods of rate law determination, steady state approximation etc. in chemical kinetics unit. After attending this course the students will be able to understand different types of surface adsorption processes and basics of catalysis including enzyme catalysis, acid base catalysis and particle size effect on catalysis.
	CHE-SE-3034: BASIC ANALYTICAL CHEMISTRY (Optional SEC Paper)	Upon completion of this course, students shall be able to explain the basic principles of chemical analysis, design/implement microscale and semimicro experiments, record, interpret and analyze data following scientific methodology.
B.Sc 4th Semester	CHE-HC-4016: INORGANIC CHEMISTRY-III	On successful completion, students will be able name coordination compounds according to IUPAC, explain bonding in this class of compounds, understand their various properties in terms of CFSE and predict reactivity. Students will be able to appreciate the general trends in the properties of transition elements in the periodic table and identify differences among the rows. Through the experiments students not only will be able to prepare, estimate or separate metal complexes/compounds but also will be able to design experiments independently which they should be able to apply if and when required.
	CHE-HC-4026: ORGANIC CHEMISTRY-III CHE-HC-4036:	Students shall demonstrate the ability to identify and classify different types of N-based derivatives, alkaloids and heterocyclic compounds/explain their structure mechanism and reactivity/critically examine their synthesis and reactions mechanism In this course the students will learn theories of conductance and

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	PHYSICAL CHEMISTRY-IV CHE-SE-4064: FUEL	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 At the end of this course students will learn about the classes of renewable and non-renewable energy sources. Students will learn
	CHEMISTRY (Optional SEC Paper)	about the composition of coal and crude petroleum, their classification, isolation of coal and petroleum products and their usage in various industries. They will also learn to determine industrially significant physical parameters for fuels and lubricants.
B.Sc 5th Semester	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	After completion of this course the students are expected to understand the application of quantum mechanics in some simple chemical systems such as hydrogen atom or hydrogen like ions. The students will also learn chemical bonding in some simple molecular systems. They will able to understand the basics of various kinds of spectroscopic techniques and photochemistry.
	CHE-HE-5026: ANALYTICAL METHODS IN CHEMISTRY (DSE Paper)	On successful completion students will be have theoretical understanding about choice of various analytical techniques used for qualitative and quantitative characterization of samples. At the same time through the experiments students will gain hands on experience of the discussed techniques. This will enable students to take judicious decisions while analyzing different samples
	CHE-HE-5056: POLYMER CHEMISTRY (DSE Paper)	After completion of this course the students will learn the definition and classifications of polymers, kinetics of polymerization, molecular weight of polymers, glass transition temperature, and polymer solutions etc. They also learn the brief introduction of preparation, structure and properties of some industrially important and technologically promising polymers.
B.Sc 6th Semester	CHE-HC-6016: INORGANIC CHEMISTRY-IV	By studying this course the students will be expected to learn about how ligand substitution and redox reactions take place in coordination complexes.Students will also learn about organometallic compounds, comprehend their bonding, stability, reactivity and uses. They will be familiar with the variety of catalysts based on transition metals and their application in industry. On successful completion, students in general will be able to appreciate the use of concepts like solubility product, common ion effect, pH etc. in analysis of ions and how a clever design of reactions, it is possible to identify the components ina mixture. With the experiments related to coordination compound synthesis, calculation of 10Dq, controlling factors etc. will make the students appreciate the concepts of theory in experiments.
	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 shall be able to classify/identify/critically examine carbohydrates, polymers and dye materials
	CHE-HE-6026: INDUSTRIAL CHEMICALS	After successful completion of the course, students would have learnt about the manufacture, applications and safe ways of storage and handling gaseous and inorganic industrial chemicals. Students will get

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AND	to know about industrial metallurgy and the energy generation
ENVIRONMENT	industry. Students will also learn about environmental pollution by
(DSE Paper)	various gaseous, liquid wastes and nuclear wastes and their effects on
	living beings. Finally, the students will learn about industrial waste
	management, their safe disposal and the importance of environment
	friendly "green chemistry" in chemical industry.
CHE-HE-6046:	After completing this course, students should be able to
RESEARCH	construct a rational research proposal to generate fruitful output
METHODOLOGY	in terms of publications and patents in the field of chemical
FOR	sciences
CHEMISTRY	Sciences.
(DSE Paper)	
or	For Dissertation student will be able to complete a project work
CHE-HE-6056	and then prepare a report on that.
Dissertation	

b) B.Sc Regular with Chemistry & Chemistry as Generic Elective

Semester	Paper Code/	Course outcome
	Name	
B.Sc 1 st Semester	CHE0100104 CHEMISTRY I	After completion of this course the students will learn the atomic structure through the basic concepts of quantum mechanics. They will understand the chemical bonding through VB and MO approaches. In organic part, the students are expected to learn basic ideas used in organic chemistry, stereochemistry, functional groups, alkenes, alkenes, alkynes etc.
B.Sc 2nd Semester	CHE0200104 Chemistry II	After completion of this course the students will learn periodic properties in main group elements, transition metals (3d series). They will also learn the crystal field theory in coordination chemistry unit. In physical chemistry part, the students are expected to learn kinetic theory of gases, ideal gas and real gases, surface tension, viscosity, basic solid state chemistry and chemical kinetics.
B.Sc 3rd Semester	CHE-RC/HG-3016: CHEMISTRY 3 CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY-I	After completion of this course the students will able to understand the chemical system from thermodynamic points of view. They will also learn two very important topics in chemistry-chemical equilibrium and ionic equilibrium. In organic chemistry part, the students are expected to learn various classes of organic molecules- alkyl halides, aryl halides, alcohols, phenols, ethers, aldehydes and ketones.
R Sc 4th	CHE-SE-3034: BASIC ANALYTICAL CHEMISTRY (Optional SEC Paper) CHE-RC/HG-4016:	Upon completion of this course, students shall be able to explain the basic principles of chemical analysis, design/implement micro scale and semi micro experiments, record, interpret and analyze data following scientific methodology.

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Semester	CHEMISTRY4 SOLUTIONS, PHASE EQUILIBRIUM, CONDUCTANCE,ELE CTROCHEMISTRY & FUNCTIONAL GROUP ORGANIC CHEMISTRY	solutions, phase rule and its application in specific cases, basics of conductance and electrochemistry. Students will also learn some important topics of organic and biochemistry-carboxylic acids, amines, amino acids, peptides, proteins and carbohydrates.
	CHE-SE-4064: FUEL CHEMISTRY (Optional SEC Paper)	At the end of this course students will learn about the classes of renewable and non-renewable energy sources. Students will learn about the composition of coal and crude petroleum, their classification, isolation of coal and petroleum products and their usage in various industries. They will also learn to determine industrially significant physical parameters for fuels and lubricants.
B.Sc 5th Semester	CHE-RE-5056: POLYMER CHEMISTRY (DSE Paper)	After completion of this course the students will learn the definition and classifications of polymers, kinetics of polymerization, molecular weight of polymers, glass transition temperature, and polymer solutions etc. They also learn the brief introduction of preparation, structure and properties of some industrially important and technologically promising polymers.
B.Sc 6th Semester	CHE-RE-6026: INDUSTRIAL CHEMICALS AND ENVIRONMENT (DSE Paper)	After successful completion of the course, students would have learnt about the manufacture, applications and safe ways of storage and handling gaseous and inorganic industrial chemicals. Students will get to know about industrial metallurgy and the energy generation industry. Students will also learn about environmental pollution by various gaseous, liquid wastes and nuclear wastes and their effects on living beings. Finally, the students will learn about industrial waste management, their safe disposal and the importance of environment friendly "green chemistry" in chemical industry.

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HaD of Chemistry Barbhag College P.O.Kale, Nabal (Asiam)

DEPARTMENT OF PHILOSOPHY

PROGRAMME OUTCOMES

Date:-

The primary goal of philosophy course is to address some of those ultimate questions so as to enable students to lead a more substantive and meaningful life and have a reasoned foundations conductive to support for human value; to an awareness of a duty to work for justice, compassion and peace; and to the integrated and rich human life worth living , thus providing students the abilities and opportunities to be more responsible for the independent word in which they find themselves. The philosophy programme seeks to promote the development of the person as an individual and as a meaningful contributor to the society.

PROGRAMME SPECIFIC OUTCOMES

The students of Philosophy will acquire the knowledge about different branches of Philosophy .They will be able to gain the skill of application of these subjective methods to other related areas .The study of this subject also open up the various parts of which he/she can select the suitable path as career path in many related and sub related areas. To develop in students a sense of the value and limits of philosophy, a reflective attitude and sensitivity to the difficulties and complexities of philosophical judgment , and a life-long commitment to learning and inquiry. The course acquaints students with General Philosophy, Indian Philosophy, Ethics, Philosophy of Religion, Logic etc. To introduce the students to reading critically the great Philosophy of life.

Paper	Course	Outcomes
PHI0100104	ANCIENT INDIAN THOUGHT	At the completion of the Course, a student is expected to be able to articulate the distinct areas of thoughts of ancient India, determine the characteristics/ distinguishing marks of a specific area of thought in ancient and identify/ trace ideas of ancient India that have continued.
PHI0200104	Greek Philosophy	It will give the students a comprehensive understanding of early Greek Philosophy. The student will learn about the questions concerning virtue, justice, theory of forms, and causality. -The student will learn about the different philosophical theories about the composition of the stuff that makes up the world
PHI-RC-3016	Ethics	This course seeks to acquaint students with the meaning, nature and scope of Ethics and the relationship of Ethics with other disciplines of study, object of moral judgement and moral obligations, the postulates of morality, concept of

COURSE OUTCOMES

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		Deontological ethics of Kant, Virtue ethics of Aristotle, Utilitarianism of Mill and Bentham, different theory of Punishment, the concept of Professional and Environmental Ethics and the study of law of karma, Varna and Asrama Dharma, Buddhist pancasila, Jaina's Triratna and its other related topics.
PHI-SE-3014	Philosophical Counseling	This course Develop flexibility in considering of other people. This course also develop fair- mindedness in appraising reasoning.
PHI-RC-4016	Logic	Students will be acquainted with the development of symbolic logic from its traditional form, the uses of symbols in logic, the concept of variables and constant, types of truth table and truth function, construction of truth table etc.
PHI-RE-5016	Cotemporary Indian Philosophy	The course outcome is to make students aware about the philosophical thoughts of different Contemporary Indian Philosophers such as Aurobindo, Radhakrishna, Gandhi and Vivekananda.
PHI-RE-6016	Philosophy of Religion	The course outcome is to understand the critical examination of religion and to understand contemporary challenge to religion.

HOD HOD Deptt. of Philosophy Barbhag College, Kalag

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DEPARTMENT OF MATHEMATICS BARBHAG COLLEGE



PROGRAMME OUTCOME

B.Sc Regular with Mathematics & Mathematics as Generic Elective

Students who choose BMATH(H) Programme, develop the ability to think critically, logically and analytically and hence use mathematical reasoning in everyday life. Pursuing a degree in mathematics will introduce the students to a number of interesting and useful ideas in preparations for a number of mathematics careers in education, research, government sector, business sectorand industry. The program covers the full range of mathematics. The course lays a structured foundation of Calculus, Real and Complex analysis, Algebra, Differential equations and Mathematical modelling, Number theory, Graph theory, Mechanics and C-programming. An exceptionally broad range of topics covering Pure and Applied Mathematics:Linear Algebra, Metric spaces, Statistics, Linear Programming and Applications, Mathematical Finance, and Bio-Mathematics cater to varied interests and ambitions.Also, to carry out the hand on sessions in Computer lab using various CAS software to have a deep conceptual understanding of the above tools to widen the horizon of students' self-experience.

PROGRAMME SPECIFIC OUTCOME:

b) **B.Sc Honours in Mathematics**

i) Communicate mathematics effectively by oral, written, computational and graphic means.

ii) Create mathematical ideas from basic axioms.

iii) Gauge the hypothesis, theories, techniques and proofs provisionally.

iv) Utilize mathematics to solve theoretical and applied problems by critical understanding, analysis and

synthesis.

v) Identify applications of mathematics in other disciplines and in the real world, leading to enhancement

of career prospects in a plethora of fields.

vi) Appreciate the requirement of lifelong learning through continued education and research

COURSE OUTCOME

Semester	Paper	Course objective	Course outcome
	Code/Name		i) Employ De Moivre's
B.Sc. 1 st Semester	MAT0100104 CLASSICAL ALGEBRA	 The primary objective of this course is to introduce the basic tools of set theory, functions, induction principle, theory of equations, complex numbers, number theory, 	 theorem in a number of applications to solve numerical problems. ii) Learn about equivalent classes and cardinality of a set. iii) Use modular arithmetic and basic properties of congruences.

a) B.Sc Honours/Regular in Mathematics

		matrices and determinant to understand their connection with the real- world problems.	 iv) Recognize consistent and inconsistent systems of linear equations by the row echelon form of the augmented matrix. v) Learn about the solution sets of linear systems using matrix method and Cramer's rule
B.Sc. 2 nd Semester	MAT0200104 Calculus	Calculus is referred as 'Mathematics of change' and is concerned with describing the precise way	 Understand continuity and differentiability in terms of limits. Describe asymptotic habaviar in terms of limits.
		in which changes in one variable relate to the changes in another. Through this course, students can understand the quantitative change in the behaviour of the variables and apply them on the problems related to the environment.	 behavior in terms of mints involving infinity. Understand the importance of mean value theorems.

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M 20	AT-HC- 026:Differenti	The main objective of this course is to introduce the	The course will enable the students to: i) Learn basics of differential equations
al E	l Equations(incl	students to the exciting world of	and mathematical modeling. ii) Formulate differential equations for
p	ıding oractical)	differential equations, mathematical modeling and their applications.	various mathematical models. iii) Solve first order non-linear differential equations and linear differential equations of higher order using various techniques.
			iv) Apply these techniques to solve and analyze various mathematical models.
	AAT-HG- 2016/MAT-RC- 2016: Algebra	The primary objective of this course is to introduce the basic tools of theory of equations, complex numbers, number theory, matrices, determinant, along with algebraic structures like group, ring and vector space to understand their connection with the real- world problems	This course will enable the students to: i) Learn how to solve the cubic and biquadratic equations, also learn about symmetric functions of the roots for cubic and biquadratic ii) Employ De Moivre's theorem in a number of applications to solve numerical problems. iii) Recognize consistent and inconsistent systems of linear equations by the row echelon form of the augmented matrix. Finding inverse of a matrix with the help of Cayley-Hamilton theorem iv) Recognize the mathematical objects that are groups, and classify them as abelian, cyclic and permutation groups, ring etc. v) Learn about the concept of linear independence of vectors over a field, and the dimension of a vector space
B.Sc. 3rd M Semester F	AT-HC-3016 : heory of Real unctions	It is a basic course on the study of real valued functions that would develop an analytical ability to have a more matured perspective of the key concepts of calculus, namely; limits, continuity, differentiability and their applications	 i) Have a rigorous understanding of the concept of limit of a function. ii) Learn about continuity and uniform continuity of functions defined on intervals. iii) Understand geometrical properties of continuous functions on closed and bounded intervals. iv) Learn extensively about the concept of differentiability using limits, leading to a better understanding for applications. v) Know about applications of mean value theorems and Taylor's theorem
G	IAT-HC-3026: Group Theory-I	The objective of the course is to introduce the fundamental theory of groups and their homomorphisms. Symmetric groups and group of symmetries are also studied	The course will enable the students to: i) Recognize the mathematical objects that are groups, and classify them as abelian, cyclic and permutation groups, etc. ii) Link the fundamental concepts of

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	MAT-HG- 3016/MAT-RC- 3016: Differential Equations	in detail. Fermat's Little theorem is studied as a consequence of the Lagrange's theorem on finite groups The main objective of this course is to introduce the students to the exciting world of ordinary differential equations, mathematical modeling and their	 groups and symmetrical figures. iii) Analyze the subgroups of cyclic groups and classify subgroups of cyclic groups. iv) Explain the significance of the notion of cosets, normal subgroups and factor groups. v) Learn about Lagrange's theorem and Fermat's Little theorem. vi) Know about group homomorphisms and group isomorphisms. The course will enable the students to: i) Learn basics of differential equations and mathematical modelling. ii) Solve first order non-linear differential equations of higher order using various techniques.
B.Sc. 4th Semester	MAT-HC-4016 :Multivariate Calculus	applicationsTo understand the extensionof the studies of singlevariable differential andintegralcalculus to functions of two ormore independent variables.Also, the emphasis will be onthe use of ComputerAlgebra Systems by whichthese concepts may beanalyzed and visualized tohave a better understanding.Thiscourse will facilitate tobecome aware ofapplications of multivariablecalculus tools in physics,economics,optimization, andunderstanding thearchitecture of curves andsurfaces in plane and spaceetc.	This course will enable the students to: i) Learn the conceptual variations when advancing in calculus from one variable to multivariable discussion. ii) Understand the maximization and minimization of multivariable functions subject to the given constraints iii) Learn about inter-relationship amongst the line integral, double and triple integral formulations. iv) Familiarize with Green's, Stokes' and Gauss divergence theorems
	MAT-HC-4026 :Numerical Methods (including practical)	To comprehend various computational techniques to find approximate value for possible root(s) of non-algebraic equations and to find the approximate solutions of system of linear equations and 22	The course will enable the students to: i) Learn some numerical methods to find the zeroes of nonlinear functions of a single variable and solution of a system of linear equations, up to a certain given level of precision. ii) Know about methods to solve system of linear equations, such as False position method, Fixed point iteration method, Newton's method.

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	MAT-HC-4036 ·	ordinary differential equations. Also, use of Computer Algebra System (CAS) by which the numerical problems can be solved both numerically and analytically, and to enhance the problem solving skills	Secant method and LU decomposition. iii) Interpolation techniques to compute the values for a tabulated function at points not in the table. iv) Applications of numerical differentiation and integration to convert differential equations into difference equations for numerical solutions. On completion of this course, the student
	Ring Theory	to introduce the fundamental theory of rings and their corresponding homomorphisms. Also introduces the basic concepts of ring of polynomials and irreducibility tests for polynomials over ring of integers.	 will be able to: i) Appreciate the significance of unique factorization in rings and integral domains. ii) Learn about the fundamental concept of rings, integral domains and fields. iii) Know about ring homomorphism and isomorphism theorems of rings. iv) Learn about the polynomial rings over commutative rings, integral domains, Euclidean domains, and UFD
	MAT-HG- 4016/MAT-RC- 4016: Real Analysis	The course will develop a deep and rigorous understanding of real line R and of defining terms to prove the results about convergence and divergence of sequences and series of real numbers.	This course will enable the students to: i) Understand many properties of the real line R, including completeness and Archimedean properties. ii) Learn to define sequences in terms of functions from R to a subset of R. iii) Recognize bounded, convergent, divergent, Cauchy and monotonic sequences and to calculate their limit superior, limit inferior, and the limit of a bounded sequence. iv) Apply the ratio, root, alternating series and limit comparison tests for convergence and absolute convergence of an infinite series of real numbers.
B.Sc. 5th Semester	MAT-HC-5016 :Riemann Integration and Metric spaces	To understand the integration of bounded functions on a closed and bounded interval and its extension to the cases where either the interval of integration is infinite, or the integrand has infinite limits at a finite number of points on the interval of integration. Up to this stage, students do study the concepts of analysis which evidently rely on the notion of distance. In this course, the objective is to develop the usual idea of distance into an abstract	The course will enable the students to: i) Learn about some of the classes and properties of Riemann integrable functions, and the applications of the Fundamental theorems of integration. ii) Know about improper integrals including, beta and gamma functions. iii) Learn various natural and abstract formulations of distance on the sets of usual or unusual entities. Become aware one such formulations leading to metric spaces. iv) Analyse how a theory advances from a particular frame to a general frame. v) Appreciate the mathematical understanding of various geometrical concepts, viz. Balls or connected sets

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	form on any set of objects, maintaining its inherent characteristics, and the resulting consequences.	etc. in an abstract setting. vi) Know about Banach fixed point theorem, whose far-reaching consequences have resulted into an independent branch of study in analysis, known as fixed point theory. vii) Learn about the two important topological properties, namely connectedness and compactness of metric spaces
MAT-HC-502 :Linear Alge	76 The objective of this course is to introduce the fundamental theory of vector spaces, also emphasizes the application of techniques using the adjoint of a linear operator and their properties to least squares approximation and minimal solutions to systems of linear equations	The course will enable the students to: i) Learn about the concept of linear independence of vectors over a field, and the dimension of a vector space. ii) Basic concepts of linear transformations, dimension theorem, matrix representation of a linear transformation, and the change of coordinate matrix. iii) Compute the characteristic polynomial, eigenvalues, eigenvectors, and eigenspaces, as well as the geometric and the algebraic multiplicities of an eigenvalue and apply the basic diagonalization result. iv) Compute inner products and determine orthogonality on vector spaces, including Gram–Schmidt orthogonalization to obtain orthonormal basis. v) Find the adjoint, normal, unitary and orthogonal operators.
MAT-HE-501 Number The	6: In number theory there are challenging open problems which are comprehensible at undergraduate level, this course is intended to build a micro aptitude of understanding aesthetic aspect of mathematical instructions and gear young minds to ponder upon such problems.	This course will enable the students to: i) Learn about some fascinating discoveries related to the properties of prime numbers, and some of the open problems in number theory, viz., Goldbach conjecture etc. ii) Know about number theoretic functions and modular arithmetic. iii) Solve linear, quadratic and system of linear congruence equations
MAT-HE-504 Linear Programmin	 6 : This course develops the ideas underlying the Simplex g Method for Linear Programming Problem, as an important branch of Operations Research. The course covers Linear rogramming with 	 This course will enable the students to: i) Learn about the graphical solution of linear programming problem with two variables. ii) Learn about the relation between basic feasible solutions and extreme points. iii) Understand the theory of the simplex method used to solve linear

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		applications to transportation, assignment and game problem. Such problems arise in manufacturing resource planning and financial sectors.	 programming problems. iv) Learn about two-phase and big-M methods to deal with problems involving artificial variables. v) Learn about the relationships between the primal and dual problems. vi) Solve transportation and assignment problems. vii) Apply linear programming method to solve two-person zero-sum game problems
	MAT-RE-5016: Number Theory	In number theory there are challenging open problems which are comprehensible at undergraduate level, this course is intended to build a micro aptitude of understanding aesthetic aspect of mathematical instructions and gear young minds to ponder upon such problems.	This course will enable the students to: i) Learn about some fascinating discoveries related to the properties of prime numbers, and some of the open problems in number theory, viz., Goldbach conjecture etc. ii) Know about number theoretic functions and modular arithmetic. iii) Solve linear, quadratic and system of linear congruence equations.
B.Sc. 6th Semester	MAT-HC-6016 :Complex Analysis (including practical)	This course aims to introduce the basic ideas of analysis for complex functions with visualization through relevant practicals. Emphasis has been given on Cauchy's theorems, series expansions and calculation of residues.	Completion of the course will enable the students to: i) Learn the significance of differentiability of complex functions leading to the understanding of Cauchy-Riemann equations. ii) Learn some elementary functions and can evaluate the contour integrals. iii) Understand the role of Cauchy-Goursat theorem and the Cauchy-Goursat theorem and the Cauchy integral formula. iv) Expand some simple functions as their Taylor and Laurent series, classify the nature of singularities, find residues and apply Cauchy Residue theorem to evaluate integrals.
	MAT-HC-6026 :Partial Differential Equations (including practical)	The main objectives of this course are to teach students to form and solve partial differential equations and use them in solving some physical problems.	 The course will enable the students to: i) Formulate, classify and transform first order PDEs into canonical form. ii) Learn about method of characteristics and separation of variables to solve first order PDE's. iii) Classify and solve second order linear PDEs. iv) Learn about Cauchy problem for second order PDE and homogeneous as well as nonhomogeneous wave equations. v) Apply the method of separation of variables for solving second order PDEs.

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MAT-HE-6046 : Hydromechani cs	The main objectives of this course are to teach students about fluid pressure on plane surfaces, curved surfaces and Gas law. Also, introduces velocity of a fluid at a point, Eulerian and Lagrangian method, velocity potential and acceleration of a fluid at a point.	The course will enable the students to: i) Know about Pressure equation, rotating fluids. ii) Learn about Fluid pressure on plane surfaces, resultant pressure on curved surfaces, Gas law, mixture of gases iii) Learn about the Eulerian and Lagrangian method. iv) Learn about equation of continuity, examples, acceleration of a fluid at a point
MAT-HE-6066 : Group Theory II	The course will develop an indepth understanding of one of the most important branch of the abstract algebra with applications to practical real- world problems. Classification of all finite abelian groups (up to isomorphism) can be done.	 The course shall enable students to: i) Learn about automorphisms for constructing new groups from the given group. ii) Learn about the fact that external direct product applies to data security and electric circuits. iii) Understand fundamental theorem of finite abelian groups. iv) Be familiar with group actions and conjugacy in S_n. v) Understand Sylow theorems and their applications in checking non-simplicity
MAT-RE-6016 : Numerical Analysis	To comprehend various computational techniques to find approximate value for possible root(s) of non-algebraic equations, to find the approximate solutions of system of linear equations and Quadratic equations.	 The course will enable the students to: i) Learn some numerical methods to find the zeroes of nonlinear functions of a single variable and solution of a system of linear equations, up to a certain given level of precision. ii) Know about iterative and non-iterative methods to solve system of linear equations iii) Know interpolation techniques to compute the values for a tabulated function at points not in the table. iv) Integrate a definite integral that cannot be done analytically v) Find numerical differentiation of functional values vi) Solve differential equations that cannot be solved by analytical methods

Rain HOD Department of Mathematics

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DEPARTMENT OF ECONOMICS BARBHAG COLLEGE <u>PROGRAMME SPECIFIC OUTCOMES OF ECONOMICS:</u>



Economics students in general will be able to pinpoint and understand the past, present economic conditions of the country. They will also be able to forecast the future course of changes and development through their knowledge of policies and programmes set by the governments and other development agencies. They are equipped with the techniques to find solution of the problems like mobilization of manpower and materials available in the country.

- As the Under Graduate Course (UGC) contains the fields like statistics, mathematics and economics principles, it enhances them to compute and assess the real situation of the economy including the size and changes of population, income pattern, nature of an extend of employment, rate of development with pattern of investments and savings, policies in relation to other countries, and social security measures adopted in the country.
- Basically, economic graduates are familiar with the knowledge and application of microeconomics and macroeconomics for the formulation of policies and planning. They are equipped with all the relevant tools/ knowledge based on economic principles including market functions and structures, efficiency in manpower and resources management, need of credit/finance for initiating and accelerating projects.
- Though the syllabi do not contain research methodology, students are taught the techniques to collect and disseminate information like primary and secondary data, preparation of questionnaire. Students are deployed to do survey and on the spot interaction with the personnel of the case under study. Students who graduated from this institution are directly involved and effectively participate in the discussions and final presentation of the findings of the projects undertaken.
- The subject Economics is highly applicable to many fields and not limited to only one career. A bachelor degree in economics, boost employability in many areas. Because of widely convenient analytical and problem-solving skills developed by students of economics, careers are extremely wide ranging and diverse.

COURSE SPECIFIC OUTCOMES:

Course Na	ime	Course Outcomes
Semester I	ECO0100104 INTRODUCTORY ECONOMICS	 To expose the students to the basic principle of micro economic theory To explore the Subject Matter of Economics and to discuss about the Elementary Theories of Demand, Supply & Market. To explain the Theory of Consumer Preferences &
		 Choice and Theory of Firm including the concepts of Production, Cost & Revenue. To enable the student to apply the theories in analyzing real world micro issues.
		• To transmit the body of basic mathematics that enables the study of economic theory at the undergraduate level, specifically the courses on

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		microeconomic theory, macroeconomic theory,
		statistics and econometrics.
		• To get an insight in to the mathematical techniques.
		• Applying methods of Differentiation in understanding
		principles of Economics
		• Getting proficiency in Integration techniques.
		Familiarize some immediate applications of
		integration in economics such as finding total from
		marginal.
		• To apply mathematical techniques to economic theory
Somostor	FC00200104	• To introduce the students to the basic concents of
II	Rasic Flements	10 Infloduce the students to the basic concepts of Macroaconomics
11	Of Economics	• This course discusses the preliminary concepts
	Of Economics	• This course discusses the preminary concepts
		aggregate macroeconomic variable like savings
		investment GDP money inflation and the balance of
		navments.
		• To teach Matrix Algebra and its applications in Partial
		Market Equilibrium Model - Simple National Income
		Determination Model & Comparative Static Analysis.
		• To understand different functions.
Semester	Есо-НС-3016:	• To provide a sound training in microeconomic theory
III	intermediate Micro	to formally analyze the behaviour of individual agents.
	Economics	• Mathematical tools are used to facilitate understanding
		of the basic concepts.
		• To look at the behaviour of the consumer and the
		producer and also covers the behaviour of a
		competitive firm.
	Eco-HC-3026:	• To introduce the students to formal modeling of a
	Intermediate	macro-economy in terms of analytical tools.
	Macro Economics	
		• To discusses various alternative theories of output and
		• To discusses various alternative theories of output and employment determination in a closed economy in the short run as well as madium run, and the role of policy
		• To discusses various alternative theories of output and employment determination in a closed economy in the short run as well as medium run, and the role of policy in this context
		 To discusses various alternative theories of output and employment determination in a closed economy in the short run as well as medium run, and the role of policy in this context. To introduce the students to various theoretical issues
		 To discusses various alternative theories of output and employment determination in a closed economy in the short run as well as medium run, and the role of policy in this context. To introduce the students to various theoretical issues related to an open economy.
	ЕСО-НС-3036.	 To discusses various alternative theories of output and employment determination in a closed economy in the short run as well as medium run, and the role of policy in this context. To introduce the students to various theoretical issues related to an open economy.
	ECO-HC-3036: STATISTICAL	 To discusses various alternative theories of output and employment determination in a closed economy in the short run as well as medium run, and the role of policy in this context. To introduce the students to various theoretical issues related to an open economy. To conceptualize the Theory of Probability. To explain the Pandom Variables and Mathematical
	ECO-HC-3036: STATISTICAL METHODS FOR	 To discusses various alternative theories of output and employment determination in a closed economy in the short run as well as medium run, and the role of policy in this context. To introduce the students to various theoretical issues related to an open economy. To conceptualize the Theory of Probability. To explain the Random Variables and Mathematical Expectation
	ECO-HC-3036: STATISTICAL METHODS FOR ECONOMICS	 To discusses various alternative theories of output and employment determination in a closed economy in the short run as well as medium run, and the role of policy in this context. To introduce the students to various theoretical issues related to an open economy. To conceptualize the Theory of Probability. To explain the Random Variables and Mathematical Expectation. To explane the Univariate Probability Distributions.
	ECO-HC-3036: STATISTICAL METHODS FOR ECONOMICS	 To discusses various alternative theories of output and employment determination in a closed economy in the short run as well as medium run, and the role of policy in this context. To introduce the students to various theoretical issues related to an open economy. To conceptualize the Theory of Probability. To explain the Random Variables and Mathematical Expectation. To explore the Univariate Probability Distributions.
	ECO-HC-3036: STATISTICAL METHODS FOR ECONOMICS	 To discusses various alternative theories of output and employment determination in a closed economy in the short run as well as medium run, and the role of policy in this context. To introduce the students to various theoretical issues related to an open economy. To conceptualize the Theory of Probability. To explain the Random Variables and Mathematical Expectation. To explore the Univariate Probability Distributions. To discuss about the Joint Probability Distribution.
	ECO-HC-3036: STATISTICAL METHODS FOR ECONOMICS	 To discusses various alternative theories of output and employment determination in a closed economy in the short run as well as medium run, and the role of policy in this context. To introduce the students to various theoretical issues related to an open economy. To conceptualize the Theory of Probability. To explain the Random Variables and Mathematical Expectation. To explore the Univariate Probability Distributions. To discuss about the Joint Probability Distribution. To make the students familiar with Sampling Theory and Sampling Distribution.
S -rest	ECO-HC-3036: STATISTICAL METHODS FOR ECONOMICS	 To discusses various alternative theories of output and employment determination in a closed economy in the short run as well as medium run, and the role of policy in this context. To introduce the students to various theoretical issues related to an open economy. To conceptualize the Theory of Probability. To explain the Random Variables and Mathematical Expectation. To explore the Univariate Probability Distributions. To discuss about the Joint Probability Distribution. To make the students familiar with Sampling Theory and Sampling Distributions
Semester	ECO-HC-3036: STATISTICAL METHODS FOR ECONOMICS ECO-HC-4016:	 To discusses various alternative theories of output and employment determination in a closed economy in the short run as well as medium run, and the role of policy in this context. To introduce the students to various theoretical issues related to an open economy. To conceptualize the Theory of Probability. To explain the Random Variables and Mathematical Expectation. To explore the Univariate Probability Distributions. To discuss about the Joint Probability Distribution. To make the students familiar with Sampling Theory and Sampling Distributions Giving conceptual clarity to the student coupled with the use of methomatical to all and methods.

Join

	MICROECONOMI CS - II ECO-HC-4026: INTERMEDIATE MACROECONOMI CS - II	 To discuss general equilibrium and welfare, imperfect markets and topics under information economics. To explore the knowledge of the Theory of Imperfect Competition. To explore the knowledge of the Theory of Oligopoly and game theory To provide the knowledge about General Equilibrium and Welfare Economics. The students are introduced to the long run dynamic issues like growth and technical progress. To explain the features of Simple Keynesian System. Introducing the Money Market. To generalize Interaction between Commodity Market & Money Market through the IS-LM Model. To explain the features of Complete Keynesian System
	ECO-HC-4036: INTRODUCTORY ECONOMETRICS	 Introducing Definition & Scope of Econometrics, Types, Relationship between Econometrics and Economic Theory, Aims /Objectives of Econometrics etc. Introducing statistical concepts of hypothesis testing, estimation and diagnostic testing of simple and multiple regression models. To explore the consequences of and tests for misspecification of regression models.
Semester V	ECO-HC-5016: INDIAN ECONOMY-I ECO-HC-5026: DEVELOPMENT	 To explore India as a Developing Economy. To discuss about the Structural Changes in Indian Economy. To explore the Trends in Demographic Features in India from Different Census Data, Theory of Demographic Transition, Population Policy etc. To discuss about the Distributional Issues in India. To explore the Meaning of Economic Development along with Alternative Approaches
	ECONOMICS-I	 With Alternative Approaches. To explain the Theories of Economic Growth & Development and growth models To make the students familiar with Development Strategies. To explain the theories of Poverty, Inequality & Development and the Roles of Market & State in Development Policymaking.
	ECO-HE-5016: ECONOMICS OF HEALTH AND EDUCATION (Elective)	 To explore the Role of Health & Education in Economic Development. Introducing Health Economics and Microeconomic Foundations of Health Economics To explore the Health Care Financing and Market Failure & 1) Rationale for Govt. Intervention.

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		 .To explore Education as Investment in Human Capital and Demand For Education, Provision & Financing
	ECO-HE-5026: MONEY AND FINANCIAL MARKETS {Elective)	 To expose the students to the theory and functioning of the monetary and financial sectors of the economy. Highlights the organization, structure and role of financial markets and institutions. To discuss interest rates, monetary management and instruments of monetary control. Financial and banking sector reforms and monetary policy with special reference to India
	ECO-HE-5036: PUBLIC FINANCE (Elective)	 To discuss about the Nature & Scope of Public Economics. To explain the Theory of Public Goods. To explain the theories of Taxation. C To look into the efficiency and equity aspects of taxation of the centre, states and the local governments and the issues of fiscal federalism and decentralisation in India. The course is useful for students aiming towards careers in the government sector, policy analysis, business and journalism.
Semester VI	ECO-HC-6016: INDIAN ECONOMY-II	 To examine sector-specific polices and their impact in shaping trends in key economic indicators in India. To highlight major policy debates and evaluates the Indian empirical evidence.
	ECO-HC-6026: DEVELOPMENT ECONOMICS-II	 To explain basic demographic concepts and their evolution during the process of development. To understand structure of markets and contracts is linked to the particular problems of enforcement experienced in poor countries. The governance of communities and organizations is studied and this is then linked to questions of sustainable growth. To discuss the reflections on the role of globalization and increased international dependence on the process of development.
	ECO-HE-6016: ENVIRONMENTAL ECONOMICS	 Focuses on economic causes of environmental problems. Try to apply economic principles to environmental questions and their management through various economic institutions, economic incentives and other instruments and policies. To explain Economic implications of environmental policy, valuation of environmental quality, quantification of environmental damages, tools for evaluation of environmental projects such as cost-benefit analysis and environmental impact assessments.
	ECO-HE-6026: INTERNATIONAL ECONOMICS (Elective)	 To develop a systematic exposition of models that try to explain the composition, direction and consequences of international trade, and the determinants and effects of

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	 trade policy. To generalize the Basic Concepts & Tools of Trade Theory. To explore the Classical Theories of Trade and the Neoclassical Modification of The Ricardian Theory. To make the students familiar with International Equilibrium and Terms of Trade. To explore the Neoclassical Trade Models and Theories of Trade Restriction.
ECO-HE-6036: THE ECONOMY OF ASSAM	 To explain the Balance of Payments and Exchange Rate. This course will provide students an idea of evolution of the Assam Economy from the colonial period to the contemporary time. The will help students to better appreciate the challenges and opportunities of the economy of Assam in the present context.

B.A. (Regular) Economics under CBCS

Course Name		Course Outcomes
Semester I	ECO-RC-1016: Principles of Microeconomics–I	 To expose the students to the basic principle of micro economic theory To explore the Subject Matter of Economics and to discuss about the Elementary Theories of Demand, Supply & Market.
Semester II	ECO-RC-2016: Principles of Microeconomics–II	 To explain Theory of Firm including the concepts of Production, Cost & Revenue. To explain the theory of factor market To enable the student to apply the theories
Semester III	ECO-RC-3016: Principles of Macroeconomics–I	 This course introduces students to the basic concepts in Macroeconomics. Macroeconomics deals with the aggregate economy. The students are introduced to the definition, measurement of the macroeconomic variables like GDP, consumption, savings, investment and balance of payments. discusses various theories of determining GDP in the short run
Semester IV	ECO-RC-4016: Principles of Macroeconomics–II	 It analyses various theories of determination of National Income in greater detail. It also introduces students to concept of inflation, its relationship with unemployment and some basic concepts in an open economy.
Semester V	ECO-RE-5016: Economic Development and Policy in	• To explain the major trends in aggregate

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	India–I ECO-RE-5026: Money and Banking	 economic indicators in India and places these against the backdrop of major policy debates in India in the post-Independenceperiod To expose the 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 India
	ECO-RE-5036: Environmental Economics	 To introduce the students to the concepts, methods and policy options in managing the environment using tools of economic analysis. To make the students accessible with an analytical mind and familiarity with basic concepts of economics. Environmental problems and issues from the Indian and international context (especially global warming). The course will be useful for students aiming towards careers in the government sector, policy analysis, business, journalism and international organisations.
	ECO-RG-5016: Economic Development and Policy in India–I	• This course reviews major trends in aggregate economic indicators in India and places these against the backdrop of major policy debates in India in the post-Independence period.
Semester VI	ECO-RE-6016: Economic Development and Policy in India–II	• To focus on sector-specific trends in key indicators and their implications in the post-Independence period
	ECO-RE-6026: Economic History of India1857-1947	• To analyse key aspects of Indian economic development during the second half of British colonial rule.
	ECO-RE-6036: Public Finance	• The course will be useful for students aiming towards careers in the government sector, policy analysis, business and journalism.
	ECO-RG-6016: Economic Development and Policy in India–II	• To understand sector-specific trends in key indicators and their implications in the post-Independence period

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G Head Department of Economics Barbhag College, Kalag

DEPARTMENT OF EDUCATION

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	DEPARTMENT OF EDUCATION
1.	Paper Code: EDU0100104
	Title of the paper: PRINCIPLES OF EDUCATION
	Course Specific Objective:
	To acquaint the students with the sound principles of education.
	To acquaint the students with the important concepts of Education, Curriculum,
	Democracy, Discipline and Freedom.
	To develop knowledge about different aims of Education, various types of
	Curriculum, Correlation of Studies and Forms of Discipline
	To familiarise the students with democratic idea of modern education.
	Course Outcome:
	Acquaint the students with the sound principles of education.
	Acquaint the students with the important concepts of Education, Curriculum,
	Democracy, Discipline and Freedom
	Familiarize the students with democratic idea of modern education
	Credit: 6
2.	Paper Code: EDU0200104
	Title of the paper: Educational Psychological
	Course Specific Objective:
	To make the students understand the relationship between education and psychology
	Explain the need of educational psychology in teaching learning process.
	Describe the nature and theories of learning and role of motivation in learning.
	Understand the concept of memory, forgetting, attention and interest.
	Understand intelligence, its theories, measurement, and concept of emotional
	intelligence.
	Be acquainted with different types of personality and the adjustment mechanism.
	Course Outcome:
	Further the need of advectional neuronal participation and psychology.
	Explain the need of educational psychology in teaching learning process. Describe the network and theories of learning and role of metivation in learning.
	 Describe the nature and theories of learning and role of motivation in learning. Understand the concent of memory forgetting attention and interest.
	Credit: 6
3	Paper Code: EDU-HC-2016
5.	Title of the paper: Philosophical and Sociological Foundation of Education
	Course Specific Objective
	 Know the concept of philosophy and its relationship with education.
	 Understand the educational implications of different Indian Schools of Philosophy.
	> Understand the educational implications of different Western schools of Philosophy
	► Know the concept of sociology and its relationship with education
	\triangleright Develop understanding about the concept of educational sociology, social groups
	and socialisation.
	Course Outcome:
	Know the concept of philosophy and its relationship with education.
	 Understand the educational implications of different Indian Schools of Philosophy
	Understand the educational implications of different Indian Schools of Philosophy.

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	Understand the educational implications of different Western schools of Philosophy		
	➢ Know the concept of sociology and its relationship with education		
	Develop understanding about the concept of educational sociology, social groups		
	and socialisation.		
	Credit:		
4.	Paper Code: EDU-HC-2026		
	Title of the paper: Development of Education in India -1		
	Course Specific Objective:		
	Recount the concept of Ancient Indian Education system		
	Describe the education system in Ancient India, Particularly Vedic Education.		
	Examine the education system in Medieval India.		
	Analyse the education system during British Period.		
	Course Outcome:		
	Recount the concept of Ancient Indian Education system.		
	Describe the education system in Ancient India, Particularly Vedic Education.		
	Examine the education system in Medieval India.		
	Analyse the education system during British Period.		
	Credit: 6		
5.	Paper Code: EDU-HC-3016		
	Title of the paper: Development of Education in India -II		
	Course Specific Objective:		
	Understand the Educational situation during the time of Independence.		
	Explain the recommendations and educational importance of different Education		
	Commission and Committees in post Independent India.		
	Analyse the National Policy on Education in different times.		
	Accustom with the recent Educational Development in India.		
	Course Outcome:		
	Understand the Educational situation during the time of Independence.		
	> Explain the recommendations and Educational importance of different Education		
	Commission and Committees in Post Independent India		
	Accustom with the recent Educational Development in India.		
	Credit: 6		
6.	Paper Code: EDU-HC-3026		
	Title of the paper: Educational Technology and Teaching Methods		
	Course Specific Objective:		
	1. Make the students understand the objective of educational technology in teaching		
	learning process.		
	2. Acquaint the students with innovations in the field of education through technology.		
	3. Make the students understand about various methods and devices of teaching.		
	4. Acquaint students with levels, effectives of teaching and classroom management.		
	5. Make the students the strategies of effective teaching as a profession.		
	Course Outcome:		
	Make the students understand the objective of educational technology in teaching		
	learning process.		
	Acquaint the students with the innovations in the field of education through technology.		
	Make the students understand about various methods and devices of teaching.		

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	Credit:		
7.	Paper Code: EDU-HC-3036		
	Title of the paper: Value and Peace Education		
	Course Specific Objective:		
	Understand the concept and meaning of value.		
	Become aware about the role of educational institutions in building a value based		
	society.		
	Understand the meaning and concept of peace and its importance in human life.		
	Understand the meaning and importance of peace education and its relevance at		
	national and international level.		
	Identify the different issues/challenges in imparting peace education.		
	Identify the strategies and skills in promoting peace education at institutional level.		
	Course Outcome:		
	Understand the concept and meaning of value.		
	Become aware about the role of educational institutions in building a value based		
	society.		
	Understand the meaning and concept of peace and its importance in human life.		
	Understand the meaning and importance of peace education and its relevance at		
	national and international level.		
	Identify the different issues/challenges in imparting peace education.		
	F Identify the strategies and skills in promoting peace education at institutional level.		
8.	Paper Code: EDU-HC-4016		
	Title of the paper: Great Educational Thinkers		
	Course Specific Objective:		
	Enable the students to learn the philosophy of life of different Educational Thinkers		
	and their works.		
	Enable the students to learn about the views of thinkers in educational context.		
	Enable the students to learn about relevance of some of their thoughts at present day context.		
	Course Outcome:		
	Enable the students to learn the philosophy of life of different Educational Thinkers		
	and their works		
	 Enable the students to learn about the views of thinkers in educational context 		
	 Enable the students to learn about relevance of some of their thoughts at present day 		
	context.		
	Credit: 6		
9	Paper Code: EDU-HC-4026		
	Title of the paper : Educational Statistics and Practical		
	Course Specific Objective:		
	Develop the basic concept of Statistics.		
	> Be acquainted with different statistical procedures used in Education.		
	> Develop the ability to represent educational data through graphs.		
	▶ Familiarize the students about the Normal Probability Curve and its applications in		
	Education.		

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	Course Outcome:
	Enable the students to learn the philosophy of life of different Educational Thinkers
	and their works.
	Enable the students to learn about the views of thinkers in educational context.
	Enable the students to learn about relevance of some of their thoughts at present day
	context.
	Credit: 6
10	Paper Code: EDU-HC-4036
10.	Title of the paper: Emerging Issues in Education
	The of the paper. Emerging issues in Education
	Course Specific Objective:
	To make the students acquaint with major emerging issues national, state and local
	To acquaint the students with the various issues in education that are emerging in
	the recent years in the higher education system.
	To address the various problems and challenges of education in India at all levels.
	Course Outcome:
	➢ Make the students acquaint with major emerging issues national, state and local
	> Acquaint the students with the various issues in education that are emerging in the
	recent years in the higher education system.
	> Address the various problems and challenges of education in India at all levels.
	Credit: 6
11.	Paper Code: EDU-HC-5016
	Title of the paper: Measurement and Evaluation in Education and Practical
	Course Specific Objective:
	\succ To enable the students to understand the concept of measurement and evaluation in
	Education.
	\succ To acquaint the students with the general procedure of test construction and
	characteristics of a good test.
	\succ To develop an understanding of different types of educational tests and their uses.
	\succ To acquaint the students about personality test and aptitude tests.
	Course Outcome:
	> Enable the students to understand the concept of measurement and evaluation in
	Education.
	Acquaint the students with the general procedure of test construction and
	characteristics of a good test.
	> Develop an understanding of different types of educational tests and their uses.
	Acquaint the students about personality test and aptitude tests.
	Credit: 6
12.	Paper Code: EDU-HC-5026
	Title of the paper: Guidance and Counselling
	Course Specific Objective:
	> To help the students to understand the concept, need and importance of Guidance
	and Counselling.
	\succ To enable the students to know the different types and approaches to Guidance and
	Counselling.
	\succ To acquaint the students with the organisation of guidance service and school
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	guidance clinic.
	To enable the learners to understand the challenges faced by the teacher as guidance
	worker.
	Course Outcome:
	Help the students to understand the concept, need and importance of Guidance and
	Counselling.
	Enable the students to know the different types and approaches to Guidance and
	Counselling.
	Acquaint the students with the organisation of guidance service and school guidance
	clinic.
	\blacktriangleright Enable the learners to understand the challenges faced by the teacher as guidance
	worker.
	Credit: 6
13	Paper Code: EDILDSE-5016
15.	Title of the paper: Continuing Education
	The of the paper. Continuing Education
	Course Specific Objective:
	> To know the concept, objectives, scope and significance of continuing education
	in the context of present scenario.
	To understand about different aspects and agencies of continuing education.
	To realize different methods and techniques as well as issues of continuing
	education
	To know the meaning of open education and realise the importance of open
	school and open universities in continuing education.
	To understand the development of adult education in India, kinds of adult
	education and different problems of adult education.
	Course Outcome:
	Know the concept, objectives, scope and significance of continuing education in
	the context of present scenario.
	Understand about different aspects and agencies of continuing education.
	Realize different methods and techniques as well as issues of continuing
	education
	Know the meaning of open education and realise the importance of open school
	and open universities in continuing education.
	Understand the development of adult education in India, kinds of adult
	education and different problems of adult education.
	Credit: 6
14.	Paper Code: EDU-DSE-5046
	•
	Title of the paper: Teacher Education in India
	Course Specific Objective
	1 To explain the concept scope aims and objectives and significance of teacher
	education
	2 To acquaint with the development of teacher education in India
	3. To acquaint with the different organising bodies of teacher education in India and
	their functions in preparation of teachers for different levels of education
	4 To acquaint with the innovative trends and recent issues in teacher education and be
	able to critically analyse the status of teacher education in India
	use to entrearry maryse the status of reacher education in india.

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	5. To understand and conceive the qualities, responsibilities and professional ethics of
	teachers.
	Course Outcome:
	1. Explain the concept, scope, aims and objectives and significance of teacher
	education.
	2. Acquaint with the development of teacher education in India.
	3. Acquaint with the different organising bodies of teacher education in India and their
	functions in preparation of teachers for different levels of education.
	4. Acquaint with the innovative trends and recent issues in teacher education and be
	able to critically analyse the status of teacher education in India.
	5. Understand and conceive the qualities, responsibilities and professional ethics of
	teachers.
	Credit: 6
15.	Paper Code: EDU-HC-6016
	Title of the paper: Education and Development
	Course Specific Objective:
	1. To find out the relation between education and development.
	2. To find out the educational development in the post globalised era
	3. To study the Role of education in community development
	4. To study economic and political awareness through education.
	Course Outcome:
	1. Relation between education and development.
	2. Educational development in the post globalised era
	3. Role of education in community development
	4. To study economic and political awareness through education.
16.	Paper Code: EDU-HC-6026
	Title of the paper: Project
	Course Specific Objective:
	1. To explain the process of conducting a Project
	2. To prepare a Project Report
	Course Outcome:
	1. Explain the process of conducting a Project
	2. Prepare a Project Report
17.	Paper Code: EDU-HE-6016
	Title of the paper: Mental Health and Hygiene
	Course Specific Objective:
	\succ To Acquaint with the fundamentals and development of mental health and the
	characteristics of a mentally healthy person.
	> To understand the concept and importance of mental hygiene and its relationship
	with mental health.
	> Acquire knowledge about the principles, factors, promoting mental health and the
	role of home, school and society in maintaining proper mental health.
	Course Outcome:
	Acquaint with the fundamentals and development of mental health and the
	characteristics of a mentally healthy person.
	Understand the concept and importance of mental hygiene and its relationship with
	mental health.

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	> Acquire knowledge about the principles, factors, promoting mental health and the
	role of home, school and society in maintaining proper mental health.
18.	Paper Code: EDU-HE-6036
	Title of the paper: Educational Management
	Course Specific Objective:
	> To develop an understanding of the basic concept of educational management
	> To enable the students to know about the various resources in education
	> To enable the students to understand to know about the various resources in
	education.
	Course Outcome:
	To develop an understanding of the basic concept of educational management
	> To enable the students to know about the various resources in education
	To enable the students to understand to know about the various resources in education.



Head, Education Dept.& Associate prof Narbinay College, Kalar

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DEPARTMENT OF ZOOLOGY BARBHAG COLLEGE



PROGRAMME OUTCOME:-

PROGRAMME: - B.Sc.(General) Zoology (CBCS)

Graduates of the programme should be able to:-

- Learn and understand about animal diversity to appreciate the variability in relation to their morphology, anatomy and behaviour of different animals.
- Understand about the structural and functional properties of cell and metabolic activities of the cell.
- Acquire knowledge about different branches of zoology such as Animal diversity, Comparative Anatomy and Developmental Biology, Physiology and Biochemistry, Genetics and Evolutionary Biology, Applied zoology, Aquatic Biology, Ornamental Fish and Fisheries, Sericulture, Apiculture and Wildlife photography and Ecotourism.
- Awareness about environment and its conservation processes, pollution control and its importance.
- Gain knowledge and develop skill over animal sciences, internal structure and functions of different systems of the body.
- Gain knowledge of communicable and non-communicable diseases of man and other animals.
- > Know basics of laboratory techniques and biochemical analysis.
- > Acquire knowledge about handling and operation of laboratory instrument.
- ➢ Gain basic knowledge on Animal identification and classification.
- ➢ Work independently in the field of zoology.
- > Persue higher education in M.Sc.or may enter into some job oriented courses.

PROGRAMME SPECIFIC OUTCOME:-

- Acquire knowledge about experimental techniques and methods of Physiology, Cell biology, Genetics, Applied Zoology and Biological techniques.
- Understand the applications of biological sciences in Apiculture, Poultry, Fisheries, Aquaculture.
- > Understand good laboratory practices.
- Students will understand ecological factors, environmental conservation and pollution control etc.
- They will be able to apply such knowledge in the practical field which help them to engage in various jobs.

COURSE SPECIFIC OUTCOME:-

Barbhag College being affiliated to Gauhati University follows the course curriculum as designed by Gauhati University. The course specific outcome for the department of zoology hence expected from the provided course curriculum has been summarized as follows-

B.Sc. (General) Zoology (CBCS):-

Semester-I. Code- ZOO-RC/HG-1016:- Animal Diversity

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- Students will be able to learn about classification of different phylum of Invertebrate and different classes of Vertebrate and their morphology, life history, organ system and the functions of such organ systems.
- They also acquire knowledge about identification and classification of different animals of animal kingdom.

Code- ZOO-RC/HG-1012:- Animal Diversity (Practical) :-

- Students gain knowledge about the identification of museum specimen and different permanent slides of certain species and their life history.
- > They have the capability to distinguish poisonous and non-poisonous snake.
- Students acquire knowledge about preparation of Animal Album.

Semester-II. Code- ZOO-RC/HG-2016:-

Comparative Anatomy and Developmental Biology of Vertebrates

- Students will understand the different physiological system such as digestive system, Respiratory system, Circulatory system, Urinogenital system, Nervous system and other systems are Integumentary system and skeletal system.
- Students will learn different aspects of early and late embryonic development and control and development of embryo.

Code- ZOO-RC/HG-2012:-

Comparative Anatomy and Developmental Biology of Vertebrates (Practical)

- > Students will learn about Mammalian skull and skeleton of fowl and rabbit.
- Students acquire practical knowledge of different embryonic developmental stages of Frog.
- > They acquire knowledge of different types of placenta and gametes of frog and rat.

Semester-III. Code- ZOO-RC/HG-3016: Physiology and Biochemistry

- Students will learn about different physiological processes such as Digestion, Respiration, Excretion, Blood circulation, Reproduction, Neural and hormonal control
- Students will understand the metabolism of carbohydrate, protein and lipid and enzyme and enzyme action.

Code- ZOO-RC/HG-3012: Physiology and Biochemistry (Practical)

- Students have the ability to determine the functional groups of carbohydrates and estimation of protein.
- > They learn how to prepare haemin crystal.
- They gain knowledge about histological structure of different endocrine glands of mammal.

Skill Enhancement Course (SEC): Code- ZOO-SE-3014: Ornamental Fish and Fisheries

After successfully completing this course, students will be able to:

- > Learn the Ornamental Fish diversity of North East India.
- ➢ Know about Aquarium plant diversioty in wetland of Assam.
- > Learn about construction and management of Home Aquarium.
- Acquire knowledge about Natural feed of ornamental fish, Strategies for maintenance of natural colour of ornamental fish, natural colour of ornamental fish, feed formulation of ornamental fish, development of Biological filtration in Aquarium and pure culture of planktons.

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In practical they able to know Identification of ornamental fish,, culture of indigenous ornamental fish, in aquarium, eastimation of physic-chemical characteristics of aquarium water, biological filter for removal of ammonia from aquarium, aquarium of plankton.

Semester-IV.Code- ZOO-RC/HG-4016: Genetics and Evolutionary biology

- Students will learn fundamental genetics such as Mendelian genetics, Linkage, Crossing over, Mutations, Crossing over and sex determination.
- Students will also able to know Evolutionary theories, Species concept,Macro evolution and Extinction.

Code- ZOO-RC/HG-4012: Genetics and Evolutionary biology (Practical)

- Students acquire practical knowledge of about Mendelian inheritance, gene interactions, Linkage, Recombination, Gene mapping, Human karyotype etc.
- Students will also learn the fossil evidences, homology, analogy and phylogeny of Horse etc.
- > They will also acquire knowledge about Natural History Museum through field study.

Semester-V: Discipline Specific Elective (DSE) Code- ZOO-RE-5016: Applied zoology

- Students able to know host parasite relationship, transmission, prevention, control of some diseases.
- Students acquire knowledge about parasitic protozoa, parasitic helminthes, insect of medical importance, economic importance of insects,
- > They gather knowledge about Animal husbandry, Poultry farming, and Fish Technology.

Code- ZOO-RE-5012: Applied zoology (Practical)

- Students acquire knowledge to identify different diseases causing organisms including protozoa, insects and helminthes.
- > They are capable to identify different insects which have economic importance.
- Acquire knowledge about rearing of poultry, maintenance of poultry farm and maintenance of Aquarium.

Code- ZOO-RE-6016: Aquatic Biology

- They are introduced with different Aquatic Biomes including estuaries, oceanic pelagic zone, marine benthic zone and also gather concept about different freshwater ecosystems.
- They also acquire knowledge about Freshwater and Marine biology. Besides these they are capable of management of Aquatic Resources.

Code- ZOO-RE-6012: Aquatic Biology (Practical)

- Students acquire practical knowledge about the estimation of different physic-chemical parameters of aquatic ecosystem.
- ➢ Gather knowledge about application of various devices used in Limnology.
- > They are capable to collect phytoplankton, zooplankton, macrophytes of freshwater ecosystem and learn about preservation techniques of such organisms.

Skill Enhancement Course (SEC): Code- ZOO-SE-3014:-

Students know about tools and techniques of Photography and Ecotourism.



DEPARTMENT OF BOTANY BARBHAG COLLEGE



PROGRAMME OUTCOMES-

Through The Completion programme in Botany students will be able to make Their good career and occupational opportunities in their life .Student will be community Conscious and Intersted regarding importance of bio-diversity and environment After successful Completion of the programme student would have clear understanding of the concept related to the nature of Virus bacteria, fungi, Lichen, bryophytes, pteridophytes and Gymnosperms. They Studied some plant diseases with species reference to the Causative agent. Student familiarized with the importance of Enzymes and plant growth hormones and their proper applications. Student will be able to understand about the Cultivation of defferent crops. From studying the programme they are able to know the different techniques of gardening , management of pest and diseases. They gain the activities based on forest products Commercial Cultivation, Collection, processing marketing of plants. Sceds, seedlings They know the improved seed production technology integrated plant Nutrient management. In order to build a proper and effective Strategy for the development of our economy through the study of the programme. On successful Completion of this programme students will be able to get job in government seetors as well as private sectors.

PROGRAMME SPECIFIC OUTCOMES – After Comptetion the programe in Botany Student will be community conscious and interested regarding importance of biodiversity and environment .They gain knowledge on classification , reproductive mechanisms ecology evolution and economic significances of bryophytes ,pteridophytes and gymnosperms .student familiarized with the importance of enzymes and plant growth hormones and their proper applications .Student will be able to understand about the cultivation of deferent crops .They are able to know the different techniques of gardening management of pest diseases. They gain the activities based on forest products Commercial Cultivation, Collection, processing marketing of plants. Seeds, seedlings They know the improved seed production technology integrated plant Nutrient management. In order to build a proper and effective Strategy for the development of our economy through the study of the programme.

COURSE OUTCOMES

BOT –**RC-1016 1st Semester Biodiversity** (Microbes, Algae, Fungi and Archegoniate) Course specific outcome: The aim of this course to introduce the students with viruses ,Bacteria Fungi Algae, Bryophyte,pteridophytes and Gymmosperms. BY studying the course the student will be expect to learn about how the descases caused by virus, Bacteria and Fungi and how the descases can be controlled .On successful completion of the course student would have clear understanding of the concept related to the nature of the virus ,Bacteria and Fungi .Student will be able to know about the Ecological and economical importance of Algae, bryophyte ,pteridophytes Lichens ,and Gymnosperms by studying the course of his paper .Studied some plant discases with species reference to the causative agents symptons Through the laboratory practiacal student are able to know microscopic structure of plant speceies and identical character of pteridophytes and Gymnospermes.

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2nd Semester Paper tittle- Plant Ecology and Taxonomy Paper code: BOT-RC-2016

Course specific outcome- This course introduce student to plant Ecology and taxonomy .Through this course students are expect to learn about the ecosystem, plant communities ,Ecological Factors and the phytogeographical region of India .Through this course they aware of the environment .The are able to understand the biogeographical region is reservoir of biodiversity without which the ecosystem will be destroyed .They gain the knowledge about the danger of Global warming ,ozonehole and various pollution .The are acquainted with how the energy flow in an ecosystem and different trophic level of food chain in an ecosystem . Moreover this course teaches the student plant Identification and their classification and different branches of Taxonomy of plants Environmental science provides a wide variety employment opportunity in government sector privat sector ,NGO ,processing units pollution control boards and many other sectors like forestry ,agriculture ,and biodiversity management .A post graduate student can also opt for managerial positions in the fields like Botanical garden ,Nurseries. Besides one can join any reputed organization as Botanist ,Environment consultant plant explorers Ecologist conservation , Park manager ,Forester ,Taxonomist.

3 rd Semester

Paper tittle – Plant physiology and Metabolism

Paper code -BOT-RC-3016

This course is intended to apprise student about the various physiological phenomenon in plant life .They know about the plant water relation ,Mineral Nutrition , food processing technique of plants (Photosynthesis) Respiration , Enzymes , and plant growth hormones. Student will be able to explain the important features of various physiological activities plant body .They familiarized with the importance of Enzymes and plant growth hormones and develop their ability to exam their properties and applications .It is observed that the economy of India based on agriculture and horticulture. .They will be beneficial by application of hormones in Agriculture and horticulture commerall they cum produce different crops as well as flowers by applying hormone in their farms .Students can get job research scientist ,Farm manager, Horticulturist , and as Agricultural consultant etc.

4 th Semester Paper tittle- Plant Anatomy and Embryology Paper code –BOT-RC-4016

On successful completion students would have clear understanding of the concept related to plant Anatomy and Embryology .Student are expected to learn and diffirent various tissues and their functions students know about the Adaptive and protective mechanism of plant . Through these course .Student would be able to know the structural organization of Flower. Students will be understand the structure of ovules embryo sac. They gain the knowledge about the tissue culture and by apply the method of tissue culture they produced a large number of offspring of the economically important and fertilization of plant species .They gain the knowledge how the plant breeding can be done and how they can be economically benefitted in future by producing a large number of essential plant species by which they can earn money to stand on foot in the society.

Principal & Secretary Barbhay College, Kalag Nalbari, Assam

5 th Semester Paper name – Economic Botany and Biotechnologhy Paper code –BOT–RC-5026



Course outcome- The aim of this course is to teach student about various economically important plant speciese and the course deals with the various uses of plants and plant .products for the well being of man mankind .Economic uses of plant are varied and scope of improve mend is immense to meet men ever increasing need. On successful completion of this course student will be able know the origin of cultivated plants – like cereals legumes ,spices ,Beverages, oils seed fats and their cultivation and uses .They know the values of fibneyelding plant like cotton. They know the technique of tissue culture and DNA technology by applying tissue culture and DNA technology. They can produce a large number plants . On successfully completion of these course student obtain job us a marketing manager pharmaceutical industry quality officer or production incharge in the food and drugs discovery graduate /post graduate can get job in or at private sectors, post gradude in Botany can be observed in teaching position in school/college and Universities.

BOT – SE-3014 Bio fertilizers After completion of the course student will be able to know about the nature of various microbes and how the microbes can be used in preparation of bio fertilizer .They can be able to know utility and application of bio fertilizer in organic farming .Through the course the student able to understand about the importance of organic Farming for the production of hygienic crops. They can be able to know manufacturing a pesticides organic based manure , vermicompost nitrogenous fertilizer ,phosphate fertilizers and their proper use in crops field .

BOT – SE-4014 Nursery and Gardening

Course specific outcome: After attending this course student will be able to learn different type of nursery, building up of infrastructure of nursery, planting and seasonal activities. They know the methods of breaking dormancy of seeds, seed storage, seed production technology seed testing. They are also know about the various of artificial reproduction like air layering cutting section of cutting, treatment of cutting planting of cutting, Hardening of plants. They know the technology of green house production. From studying the course they able to know the different technique of gardening, gardening operation manuring watering management of pest and diseases and harvesting. This course give the knowledge about the sowing of seeds cultivation of different Seasonal vegetables and their storage and marketing procedures. It expected apply that proper and effective strategy for the development of our economy will gain through this course.

BOT – SE- 5014 Medicinal Botany

Course specific outcome - student learn about the history, scope and importance of medicinal plant and Indigenous Medical science. They gain knowledge about Ayurveda and plants used in Ayurveda treatment .Know about the conservation of endangered and endemic medicinal plants and Red list criteria . Student are able to know ethno botany and folk medicines and ethno medicine and application of natures product to certain diseases . On successful completion of this course students able to obtain jobs as in pharmaceutical industry and at private and government sectors relatate to medicine

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