

Programme outcomes, Programme specific outcomes and Course outcomes for all Programmes

Udalguri College is affiliated to Gauhati University and Bodoland University and as such it follows the programme wise curriculum designed by the concerned universities. The subjects are Assamese, Bodo, Economics, Education, English, History, Nepali, Philosophy and Political Science. It also offers 6 honors' and 6 regular courses from Science stream and the subjects are Botany, Chemistry, Mathematics, Physics and Zoology. Besides this, Environmental Studies is a compulsory subject in 3rd & 4th Semester for students of both Arts & Science Stream. The learning outcomes of the programmes and courses are stated clearly by the universities. The same is published in the official website of the universities which can be downloaded by the affiliated colleges.

The College has its own mechanism to communicate the learning outcomes of the curriculum to the teachers and the students.

Hard copy of syllabi and learning outcomes are available in all the departments for teachers as well as students as and when required.

DEPARTMENT OF ASSAMESE: Programme Outcome: Students become familiar with the traditions of Assamese Literature & Linguistics which in turn becomes a preparatory ground for higher studies.

Course	Outcome
Asm-Hc-1016:Asomiye Sahityas Buranji (Charjyapad Sankarijuz)	এই পাঠ্যৰ জৰিয়তে ছাত্ৰ-ছাত্ৰীসকলে অসমীয়া সাহিত্যৰ যুগবিভাজন সম্পৰ্কে কনাৰ লগতে উমৈহতীয়া সাহিত্য আৰু প্ৰাকশংকৰী যুগৰ সাহিত্যিক সকলৰ ৰচনাৰ বৈশিষ্ট্য সম্পৰ্কে জানিব পাৰিব।
Asm-Hc-1026:Asomiye Sahityas Buranji (Uttar Sankari Jug,Areenodai Jug)	এই পাঠ্যৰ জৰিয়তে ছাত্ৰ-ছাত্ৰীসকলে উত্তৰ শংকৰী যুগ, প্ৰাক অৰুণোদই, অৰিণোদই যুগৰ পটভূমি আৰু অই সময়ৰ সাহিত্যিক সকলৰ ৰচনাৰ সৈতে পৰিচিত হ'ব পাৰিব।
ASM-AE-1014: Sakshamata Vikash pathya	এই পাঠ্যৰ জৰিয়তে ছাত্ৰ-ছাত্ৰীসকলে অসমীয়া ভাষা যোগাযোগৰ মাধ্যম হিচাপে ব্যৱহাৰ কৰিবলৈ প্ৰয়োজনীয় কথন আৰু দক্ষতা অৰ্জনৰ তাত্ত্বিক আৰু প্ৰায়োগিক জ্ঞান লাভ কৰিব।
ASM-RC-1016: Asomiya Bhesar Itihas:	এই পাঠ্যৰ জৰিয়তে ছাত্ৰ-ছাত্ৰীসকলে অসমীয়া ভাষাৰ ক্ৰমবিকাশ সম্পৰ্কে জানিব পাৰিব।
ASM-HC-2016: Bhasha Biggan Parichay	এই পাঠ্যৰ জৰিয়তে ছাত্ৰ-ছাত্ৰীসকলে ভাষা-বিজ্ঞানৰ আধাৰত ভাষা বিশ্লেষণৰ বিভিন্ন শাখা, স্তৰ আৰু ধৰণৰ লগতে বহাৰা অধ্যয়নৰ ইতিহাস সম্পৰ্কে জানিব পাৰিব।
ASM-HC-2026: Sahitya Samalochna	এই পাঠ্যৰ জৰিয়তে ছাত্ৰ-ছাত্ৰীসকলে প্ৰাচ্য আৰু পাশ্চাত্য সাহিত্য তত্ত্ব কিছুমান চৰ্চিত দিশ নতুন কৈ চাব পাৰিব।
ASM-HC-2016: Asomiya Sahitya Itihas	এই পাঠ্যৰ জৰিয়তে ছাত্ৰ-ছাত্ৰীসকলে প্ৰাক-শংকৰী যুগ, শংকৰী যুগ আৰু উত্তৰ শংকৰী যুগৰ সাহিত্যৰ পটভূমি আৰু বিশিষ্ট সাহিত্যকৃতিৰ ধাৰণা লাভ কৰিব পাৰিব।
ASM-HC-3016: Asomiya sahitya prabesh	এই পাঠ্যৰ জৰিয়তে ছাত্ৰ-ছাত্ৰীসকলে সৃজনীমূলক আৰু সমালোচনামূলক সাহিত্যৰ সম্পৰ্কে বিশেষ ধাৰণা লাভ কৰিব পাৰিব।
ASM-HC-3026: Asomiya Kobitar Saneki	এই পাঠ্যৰ জৰিয়তে ছাত্ৰ-ছাত্ৰীসকলে প্ৰাচীন কবিতা, ৰমন্যাসিক কবিতা আৰু আধুনিক কবিতাৰ সৈতে পৰিচিত হ'ব পাৰিব।
ASM-HC-3036: Asomor Sanskriti	এই পাঠ্যৰ জৰিয়তে ছাত্ৰ-ছাত্ৰীসকলে অসমৰ সংস্কৃতিৰ লোকাচাৰ, ধৰ্মীয় পৰম্পৰা, উৎসৱ-পাৰ্বণ পৰিবেশ কলা, স্থাপত্য ভাৰ্কৰ্ম, চিত্ৰকলাৰ জ্ঞান লাভৰ লগতে বৃহত্তৰ অসমীয়া জাতি গঠনৰ আভাষ লাভ কৰিব।
ASM-SE-3014:Byaboharik Asomiya	এই পাঠ্যৰ জৰিয়তে ছাত্ৰ-ছাত্ৰীসকলে অসমীয়া বিষয়ৰ জ্ঞানেৰে পৰৱৰ্তী পৰ্য্যায়ত বৃত্তিমূলক দিশৰ প্ৰাথমিক আৰু প্ৰায়োগিক জ্ঞান লাভ কৰিব।
ASM-RC-3016: Asomiya Natak aru Manchakala	এই পাঠ্যৰ জৰিয়তে ছাত্ৰ-ছাত্ৰীসকলে লোকনাট্য, প্ৰচেনিয়াম, ভিকল্প মঞ্চৰ বিষয়ে জনাৰ লগতে মঞ্চ আৰু অভিনয়ৰ আনুষংগিক জ্ঞান লাভ কৰিব পাৰিব।
ASM-HC-4016:Tulanamulak Bharatiya Sahitya	এই পাঠ্যৰ জৰিয়তে ছাত্ৰ-ছাত্ৰীসকলে তুলনামূলক সাহিত্যৰ পটভূমিৰ বিষয়ে জনাৰ লগতে আধুনিক ভাৰতীয় সাহিত্যৰ বিষয়ে জানিব পাৰিব।
ASM-HC-4026:Asomiya Bhasar Samaharar	এই পাঠ্যৰ জৰিয়তে ছাত্ৰ-ছাত্ৰীসকলে বাংলা, উড়ীয়া আদি আৰ্য ভাষাৰ লগত অসমীয়া ভাষাৰ সম্পৰ্কৰ বিষয়ে জনাৰ উপৰিও অসমীয়া ভাষাত আৰ্য উপাদান আন্দ প্ৰভাৱ আদিৰ বিষয়ে জানিব পাৰিব।

ASM–HC-4036:Asomiya Gadya Sahitya	এই পাঠ্যৰ জৰিয়তে ছাত্ৰ-ছাত্ৰীসকলে শংকৰ দেৱৰ নাটকৰ গদ্যৰ পৰা বুৰঞ্জী গদ্যলৈকে ধাৰণা লাভ কৰিব।
ASM –CC-4016:Adhunik Axomiya Hahitya	এই পাঠ্যৰ জৰিয়তে ছাত্ৰ-ছাত্ৰীসকলে অসমীয়া সাহিত্যৰ বহু-বহু কবিতা, গল্প, প্ৰবন্ধ আৰু নাটক আদিৰ সৈতে অন্তৰংগতা স্থাপন কৰিব পাৰিব।
ASM–SE-4014:Srijanimulak Sahitya	এই পাঠ্যৰ জৰিয়তে ছাত্ৰ-ছাত্ৰীসকলে কবিতা আৰু গল্প লিখাৰ প্ৰাথমিক জ্ঞান লাভ কৰিব।
ASM–RC-4016:(Adunik Asomiya CreetteeSahitya	এই পাঠ্যৰ জৰিয়তে ছাত্ৰ-ছাত্ৰীসকলে অসমীয়া গীতি সাহিত্যৰ বিষয়ে জানিব পাৰিব।
ASM –HC-5016:Asomiya Natak Aru Paribesan Sali	এই পাঠ্যৰ জৰিয়তে ছাত্ৰ-ছাত্ৰীসকলে অসমীয়া নাটকৰ ইতিহাসৰ ৰূপৰেখাৰ বিষয়ে জনাৰ লগতে প্ৰতিনিধিমূলক নাটকৰ শৈলীৰ সৈতেও পৰিচিতি লাভ কৰিব।
ASM–HC-5026:Asomiya Byakaran	এই পাঠ্যৰ জৰিয়তে ছাত্ৰ-ছাত্ৰীসকলে উচ্চ- ব্যাকৰণ ৰীতি অনুযায়ী অসমীয়া ভাষাৰ বৈয়াকৰণিক বিশ্লেষণ আয়ত্ত্ব কৰিব পাৰিব।
ASM–HC-5016:Asomiya Loko-Sahitya Adhyan	এই পাঠ্যৰ জৰিয়তে ছাত্ৰ-ছাত্ৰীসকলে অসমীয়া লোক সাহিত্যৰ স্বৰূপ আৰু বিভিন্ন সময়ৰ সৈতে পৰিচিত হ'ব।
ASM –SE-5016:Abritti kala	এই পাঠ্যৰ জৰিয়তে ছাত্ৰ-ছাত্ৰীসকলে কবিতা আবৃত্তিৰ তাত্ত্বিক আৰু প্ৰায়োগিক জ্ঞান লাভ কৰিব।
ASM–HC-6016:Asomiya Suti Galpa aru Upanyas	এই পাঠ্যৰ জৰিয়তে ছাত্ৰ-ছাত্ৰীসকলে অসমীয়া চুটিগল্প আৰু উপন্যাসৰ বিষয়ে জনাৰ লগতে কিছুমান উল্লেখযোগ্য চুটিগল্প আৰু উপন্যাসৰ ৰসস্বাদন কৰিব পাৰিব।
ASM–HC-6026:Asomiya Lipir Itihas	এই পাঠ্যৰ জৰিয়তে ছাত্ৰ-ছাত্ৰীসকলে অসমীয়া লিপিৰ জ্ঞান লাভ কৰিব।
ASM–HE-6016:Lakshiminath Bejbaruah	এই পাঠ্যৰ জৰিয়তে ছাত্ৰ-ছাত্ৰীসকলে সাহিত্যৰথী লক্ষ্মীনাথ বেজবৰুৱাৰ সৃষ্টিশীল আৰু চিন্তামূলক লেখনিৰ আভাষ পাব।
ASM–HE-6056:Prakalpa	প্ৰকল্পৰ জৰিয়তে ছাত্ৰ-ছাত্ৰী সকলৰ প্ৰায়োগিক গবেষণামূলক দিশৰ জ্ঞান লাভ কৰিব।
ASM–RE-6016:Chanda aru Alankar	এই পাঠ্যৰ জৰিয়তে ছাত্ৰ-ছাত্ৰীসকলে হৃন্দ আৰু অলংকাৰৰ তাত্ত্বিক জ্ঞান লাভ কৰিব।
ASM–SE-6014:Asomiya Akhar Jutani	এই পাঠ্যৰ জৰিয়তে ছাত্ৰ-ছাত্ৰীসকলে অসমীয়া আখৰ জোটাৰ নিয়ম আৰু কৌশল আহৰণ কৰিব পাৰিব।

DEPARTMENT OF BODO: Programme Outcome: Students become familiar with the traditions of Bodo Literature & Linguistics which in turn paves the way for further studies.

Course	Outcome
BOD-HC-1016 History of Bodo Literature	Come to know about the contribution of the Missionaries and thereafter in the domain of Bodo literary history
BOD-HC-1026 Literary Criticism (Western)	Come to know about Western Literary Criticism
BOD-AE-1014 Communicative Bodo)	Come to know about communicative Bodo
BOD-HG-1016 Textual Analysis on Bodo Drama (Early period)	Come to know about the origin, the textual and contemporary trends of Bodo drama
BOD-HC-2016 History of Bodo Literature (Modern Period, 1952 to 2015)	Come to know about modern period of Bodo literature along with new trends & developments in Bodo literature
BOD-HC-2026 Literary Criticism (Eastern)	Come to know about theory and concept of eastern literary criticism, the uses of Rasa, Chanda and Alankara with special reference to Bodo literature
BOD-HG-2016 Non-fictional prose in Bodo	Come to know about the changes coming in Bodo non-fictional prose from early to modern period
BOD-HC-3016 Introduction to Language and Linguistics	Come to know about language and linguistics and levels of linguistic analysis
BOD-HC-3026 Bodo Poetry (Early period)	Come to know old Bodo poetry, the romantic trends & Social awareness
BOD-HC-3036 Introduction to Culture	Come to know about the general concept of culture, the relation between folklore and society and about the diffusion, acculturation and assimilation of culture

BOD-SE-3014 Translation Studies	Come to know about theory, concept and types of translation in Bodo.
BOD-HG-3016 Bodo Drama	Come to know different types of drama in Bodo literature, the influence of Assamese and Bangla drama in Bodo literature and a few selected dramas in Bodo
BOD-HC-4016 Modern Bodo Poetry (From 1952 to 2015)	Come to know about the trend of modern Bodo poetry, new symbols and techniques used by the poets
Bod-HC-4026 Bodo Language	Come to know about origin, concentration and development of the Bodo language and the status of Bodo language
BOD-HC-4036 Bodo Culture	Come to know about Bodo society and culture and the cultural elements of the Bodos
BOD-SE-4014 Manuscript Preparation	Come to know about manuscript preparation and use of punctuations and symbols, the benefits of editing and taking into MS word & PageMaker
BOD-HG-4016 Bodo Fiction	Come to know about Bodo novels and Bodo short stories
BOD-HC-5016 Manoranjan Lahary	Come to know about life and literary works of Manoranjan Lahary
BOD-HC-5026 Structure of Bodo Language	Come to know about phonology of Bodo language, the structure of morphology, syntax and vocabulary of Bodo language
BOD-HE-5016 Bodo Folk-Literature	Come to know about Bodo folk-literature and its sub-division and the genres of Bodo folk-literature
BOD-HE-5026 Dialects of Bodo Language	Come to gather a general idea on dialect and dialectology of Bodo language, Bodo dialects and its uses in literature
BOD-HC-6016 Contribution of women writers in Bodo literature	Come to know about women writings in Bodo in different genres of literature
BOD-HC-6026 Cognate Languages of the Bodo	Come to know about Bodo group of languages and their common characteristics, phonology, morphology and vocabulary of Bodo group of languages
BOD-HE-6016 Life Writing in Bodo	Come to know about life writing and its types biography and travel works in Bodo
BOD-HE-6026 Dissertation Writing	In this paper, students are suggested to prepare a dissertation at least of 50 pages on the topic assigned by the departmental teachers using research methodology.
BOD-RC-1016 Textual Analysis on Bodo Drama (Early period)	Come to know about the background of Bodo drama and about old period Bodo drama.
BOD-AE-1014 Communicative Bodo	Come to know about spelling system used in writing Bodo language and the application of Bodo language in different perspectives.
BOD-RC-2016 Non-fictional prose in Bodo	Come to know about development of non-fictional prose in early and modern period and acquire knowledge about few prose pieces in Bodo.
BOD-CC-3016 Kamal Kumar Brahma	Come to know about life and works of litterateur Kamal Kumar Brahma and the linguistic and literary contribution of Kamal Kumar Brahma.
BOD-RC-3016 Bodo Drama	Students can learn about different types of drama in Bodo literature, the influence of Assamese and Bangla drama in Bodo literature and a few selected dramas in Bodo.
BOD-SE-3014 Translation Studies	Come to know about types of translation and about translation from different aspects in Bodo and a review of translated literature in Bodo.
BOD-CC-4016 Nilkamal Brahma	Come to know about life and works of litterateur Nilkamal Brahma and about the literary contributions of Nilkamal Brahma in different genres of literature.

BOD-RC-4016 Bodo Fiction	Come of know about Bodo novels and Bodo short stories.
BOD-SE-4014 Manuscript Preparation	Come to know about manuscript preparation and use of punctuations and symbols and of the bene fits of editing and taking into MS Word & PageMaker.
BOD-SE-5014 Costume and Textile Design of the Bodos	Come to know about costume and textile design of the Bodos and about changing trend of costume and textile design from tradition to modernity.
Bodo Folk-Literature	Come to know about Bodo folk-literature and its sub-division and about different genres of Bodo folk-literature.
BOD-RG-5016 Children Literature	Come to know about development of children literature in Bodo and a review of few children literature in Bodo.
BOD-SE-6014 Food processing system of the Bodos: Tradition to Modernity	Come to know about the food processing system of the Bodos from past to present.
BOD-RE-6016 Life Writing in Bodo	Come to know about life writing and its types and about biography and travel works in Bodo
BOD-RG-6016 Dissertation Writing	In this paper, students are suggested to prepare a dissertation of at least of 50 pages on the topic assigned by the departmental teachers using research methodology. Examiners will examine this dissertation.

DEPARTMENT OF BOTANY: Programme Outcome: Students get to know about Botany and the different angels associated with its study. The UG course in Botany becomes a platform for higher studies in the near future.

Course	Outcome
Core Papers Paper Name: Phycology and Microbiology Paper code: BOT-HC-1016	Students can acquire detailed knowledge on microbes, viruses and bacteria, and their importance in agriculture and medicine. Students can gain knowledge on Algal classification, Economic and ecological importance of Algae.
Paper Name: Phycology and Microbiology(Practical) Paper code: BOT-HC-1016	Students can gather practical knowledge on structure of T-Phage and TMV, lytic and lysogenic life cycle. Students can gather practical knowledge on microscopy of bacteria and algae.
Paper Name: Biomolecules and Cell Biology Paper code: BOT-HC-1026	Students can acquire detailed knowledge on structure, classification and physicochemical properties of biomolecules and enzymes. Students can acquire detailed knowledge on structure, properties and functions of cell and its components.
Paper Name: Biomolecules and Cell Biology(Practical) Paper code: BOT-HC-1026	Students will able to have practical knowledge on properties of cell and cell membrane, DNA staining techniques and microscopy of plant cell. Students can acquire knowledge on qualitative tests of biomolecules.
Honours Generic Elective Paper Paper Name: Biodiversity (Microbes, Algae, Fungi and Archegoniate) Paper code: BOT-HG-1016	Students can gather knowledge on structure and reproduction of viruses and bacteria, describe general characteristics, morphological diversity, thallus organization, life cycles, of algae, fungi, bryophytes, pteridophytes and gymnosperms. Detailed knowledge on classification, evolution, economic importance and diversity of plant forms.
Paper Name: Biodiversity (Microbes, Algae, Fungi and Archegoniate) (Practical) Paper code: BOT-HG-1016	Students can acquire practical knowledge on staining and slide preparation to study bacteria, algae and fungi under the microscope. Practical knowledge on vegetative and reproductive structures of some representative bryophytes, pteridophytes and gymnosperms.

Core Papers Course Name: Mycology and Phytopathology Paper code: BOT-HC-2016	Students can gather detailed knowledge on different classes of fungi, their structure, classification, life cycle and Reproduction. Knowledge on diseases in plants caused by viruses, bacteria and fungi and biotechnological applications of fungi.
Paper Name: Mycology and Phytopathology (Practical) Paper code: BOT-HC-2016	Students can learn through detailed structural analysis of different classes of fungi and their reproductive stages. Knowledge on structures of symbiotic associations (Lichens, Mycorrhiza).
Paper Name: Archegoniate Paper code: BOT-HC-2026	Students can get detailed knowledge on morphology, anatomy, classification and properties of bryophytes, pteridophytes and gymnosperms. Knowledge on reproduction and economic importance and ecological significance of bryophytes, pteridophytes and gymnosperms.
Paper Name: Archegoniate (Practical) Paper code: BOT-HC-2026	Students can have practical knowledge on morphology and reproductive structures of archegoniate. Understand spore morphology analysis and detailed knowledge on male and female reproductive structures in gymnosperms.
Honours Generic Elective Paper Paper Name: Plant Ecology and Taxonomy Paper code: BOT-HG-2016	Students can improve their understanding on soil, water, light and temperature as ecological factors. Knowledge on adaptive characters of hydrophytes and xerophytes and plant community types and their succession, ecosystem, trophic levels and energy flow in ecosystems, biogeochemical cycling with an emphasis on carbon, nitrogen and phosphorus cycles. Knowledge on phytogeography and endemism, plant taxonomy, principles, ICN rules, ranks and hierarchy, different systems of plant classification and cluster analysis.
Paper Name: Plant Ecology and Taxonomy (Practical) Paper code: BOT-HG-2016	Students can enhance their practical knowledge on soil temperature measurement, humidity measurement, rainfall, estimation and light intensity measurement, learn about adaptive morphological characterization of hydrophytes and xerophytes. Determine quadrat size and frequency distribution of herbaceous plants in ecology and gather practical knowledge on plant identification up to the family level and learn to prepare of herbarium specimens.
Core Papers Paper Name: Morphology and Anatomy of Angiosperm Paper code: BOT-HC-3016	Students can gather knowledge on morphology of angiosperms and developmental biology of plant body. Knowledge on structural and anatomical organization of tissue system in plants and their classification.
Paper Name: Morphology and Anatomy of Angiosperm (Practical) Paper code: BOT-HC-3016	Students can acquire practical knowledge on inflorescences and fruits of angiosperms. Practical knowledge on anatomical features of plant body parts.
Paper Name: Economic Botany Paper code: BOT-HC-3026	Students can enhance their knowledge on morphology, uses and economic importance of crop plants. Knowledge on uses of industrially important plants.
Paper Name: Economic Botany (Practical) Paper code: BOT-HC-3026	Students can gather practical knowledge on economically important plant parts and their products. Anatomical knowledge on economically important crops with their botanical characters and parts used.
Paper Name: Genetics	Students can acquire knowledge on Mendelian concepts in genetics; structure, functions and properties of chromosome; chromosomal aberration. Knowledge on

Paper code: BOT-HC-3036	gene structures and gene mutations, population genetics.
Paper Name: Genetics (Practical) Paper code: BOT-HC-3036	Students can have practical knowledge on chromosomal mapping and gene interaction studies. Practical visualization of chromosomal anomalies.
Honours Generic Elective Paper Paper Name: Plant Physiology and Metabolism Paper code: BOT-HG-3016	Students can enhance their understanding regarding the roles of water in plant physiology, transpiration, and guttation, knowing of macro- and micro-nutrients and mineral uptakes and transportations of minerals and foods in plants. Knowledge on photosynthetic pigments, photosynthetic reactions and photorespiration, understanding of respiration processes, enzymes, biological nitrogen fixation, plant hormones, and plant responses to light and temperature.
Paper Name: Plant Physiology and Metabolism (Practical) Paper code: BOT-HG-3016	Students can learn to determine osmotic potentials of plant cells and effect of light on transpiration, calculate stomatal index and frequency. Demonstrate the effect of pH and concentrations incatalase activity and effect of bicarbonate concentration on O ₂ evolution in photosynthesis.
Skill Enhancement Paper Paper Name: Biofertilizers Paper code: BOT- SE-3014	Students can enhance their basic knowledge on the microbes used as biofertilizer and understand the process of their isolation, identification, mass multiplication, carrierbased inoculants and knowledge on actinorrhizal symbiosis. Concept on use of different life forms as biofertilizer such as bacteria, cyanobacteria and brief knowledge on the mycorrhizal association. Details about the organic farming, maintenance and recycling of biodegradable waste material and understand the methods of making biocompost and vermicompost with application.
Core Papers Paper Name: Molecular Biology Paper code: BOT-HC-4016	Students can gather detailed knowledge on architecture of nucleic acids, organization of DNA in organisms, models of replication and the factors associated with it. Detailed knowledge on transcriptional and post transcriptional events in a cell, translation of proteins.
Paper Name: Molecular Biology (Practical) Paper code: BOT-HC-4016	Students can get practical acquaintance of isolation and quantification of DNA from plants. Knowledge on photographic study of RNA polymerases and RNA modification machinery.
Paper Name: Plant Ecology and Phytogeography Paper code: BOT-HC-4026	Students can gather knowledge on origin, formation and properties of abiotic components of the ecosystem, interactions and adaptation of plants with biotic and abiotic factors. Knowledge on properties of communities in a population and tropical and habitat organization in an ecosystem.
Paper Name: Plant Ecology and Phytogeography (Practical) Paper code: BOT-HC-4026	Students can acquire practical knowledge on property analysis of abiotic components of the ecosystem. Practical knowledge on vegetation study and different ecological sites.
Paper name: Plant Systematics Paper code: BOT-HC-4036	Students can gain knowledge on plant identification and classification systems, plant nomenclature. Knowledge on phylogenetic and evolutionary relationships of angiosperms.
Paper name: Plant Systematics (Practical) Paper code: BOT-HC-4036	Students can acquire practical knowledge on foliar morphology and taxonomical study of angiosperms.

	Practical knowledge on plant identification upto the family level that belongs to Fabaceae, Solanaceae, Acanthaceae, Lamiaceae, Euphorbiaceae, Musaceae, Orchidaceae. Student can learn to prepare of herbarium.
Honours Generic Elective Paper Paper name: Plant Anatomy and Embryology Paper code: BOT-HG-4016	Students can gather knowledge on different types of tissues and their organizations, secondary growth and anomalous structures, adaptive and protective characters of plants. Understanding the reproductive units of a flower; ovule types, ovary types, pollination and fertilization mechanisms; embryo and endosperm developments and functions.
Paper name: Plant Anatomy and Embryology (Practical) Paper code: BOT-HG-4016	Hands on experiences on slide preparation for anatomical studies of leaf, stem and root. Students can learn flower dissection and study of flower reproductive parts and events.
Skill Enhancement Paper Paper name: Nursery and Gardening Paper code: BOT-SE-4014	Students can gather a brief idea about objectives, scope, infrastructure and maintenance of nursery. Concept on structure, types and dormancy of seeds and brief idea about seed storage including types and process and knowledge on seed production technology. Knowledge on various modes of vegetative propagation and maintenance of plants in green house, development and maintenance of gardening including scope and types and understand the various gardening operations including management of pests and diseases. Detail knowledge on managements of seeds and seedlings and concept about cultivation, storage and marketing of important vegetables.
Core Papers Paper name: Reproductive Biology of Angiosperms Paper code: BOT-HC-5016	Students can gain knowledge on detailed morphological and anatomical study of reproductive structures of angiospermic plants. Knowledge on embryology and embryological abnormalities in angiosperms.
Paper name: Reproductive Biology of Angiosperms (Practical) Paper code: BOT-HC-5016	Students can acquire practical knowledge on Structural documentation of reproductive structures of angiosperms. Practical knowledge on developmental biology of embryo and endosperms.
Paper name: Plant Physiology Paper code: BOT-HC-5026	Student can acquire detailed knowledge on mechanisms of water, minerals and nutrient absorption of plants. Knowledge on roles of plant hormones and mechanism of flowering in plants.
Paper name: Plant Physiology (Practical) Paper code: BOT-HC-5026	Students can gather practical knowledge on effects of growth regulators on plant parts. Practical knowledge on determination of osmotic and water potential.
Discipline Specific Elective (DSE) Papers Paper name: Natural Resource Management Paper code: BOT-HE-5016	Students can gather comprehensive knowledge on different types of natural resources and their ecological, economical and socio-cultural values. Basic understandings of land, water and forest resources and overall knowledge on resource degradation, their judicious use and management for sustainability. Knowledge on biodiversity-its importance, management and Bioprospecting, IPR, and global arena on resource management, conservation and benefit sharing.
Paper name: Natural Resource Management (Practical)	Students will get hands on experience on the domestic solid waste estimation and determining its impact on land

Paper code: BOT-HE-5016	degradation. Hands on experience on forest study using tools like GPS/GIS, and understanding of ecological importance of forest resources.
Paper name: Horticultural Practices and Post-Harvest Technology Paper code: BOT-HE-5026	Students can improve their basic understandings on Horticultural science and its importance in employment generation and socio-economic development. Students can understand about the classification of horticultural crops, identification of potential horticultural crops—their cultivation, production, management and commercialization. Overall knowledge on post-harvest technology, disease management, and germplasm management for horticulture.
Paper name: Horticultural Practices and Post-Harvest Technology (Practical) Paper code: BOT-HE-5026	Students can have a practical knowledge on horticultural techniques, landscaping and gardening. Practical knowledge on important horticulture crops.
Core Papers Paper name: Plant Metabolism Paper code: BOT-HC-6016	Students can gather detailed knowledge of metabolic events of photosynthesis and nutrient metabolism. Knowledge of signaling molecules and pathways in the plant cell.
Paper name: Plant Metabolism (Practical) Paper code: BOT-HC-6016	Students can have practical knowledge on different types of chromatographic techniques. Estimation of TAN, sugar and protein contents in plant sample.
Paper name: Plant Biotechnology Paper code: BOT-HC-6026	Students can acquire knowledge on applications of tissue culture techniques, construction of recombinant DNA and transformation into hosts, construction of DNA libraries. Knowledge on development of transgenic plants for agricultural or industrial use.
Paper name: Plant Biotechnology (Practical) Paper code: BOT-HC-6026	Students can get a better understanding on practical utility on isolation of plasmid DNA, its digestion and separation of fragments through gel electrophoresis. Students can learn regarding the preparation of media for tissue culture techniques and photographic study of plant tissue culture. Photographic study of generating transgenic plants for agriculture.
Discipline Specific Elective (DSE) Papers Paper name: Industrial and Environmental Microbiology Paper code: BOT-HE-6016	Students can gather better understanding on the roles of microbes in industries and environment. Knowledge on application of enzymes in industries and diversity and distribution of microbes in air, water and soil. Basic understandings on water microbiology and water analysis methods and usefulness of microbes in agriculture and bioremediation of contaminated soils.
Paper name: Industrial and Environmental Microbiology (Practical) Paper code: BOT-HE-6016	Students can experience hands on sterilization techniques and preparation of culture media. Practical experiences on basic microbiological techniques and handlings such as functioning of microbial instruments and pure culture techniques. Students can acquire knowledge on microscopy and imaging in plant science. Principles and application of centrifuge, spectroscopy and chromatography in biology. Students can enhance their basic knowledge on biostatistics including measures of central tendency and dispersions, statistical data analysis and representations.
Paper name: Analytical Techniques in Plant Sciences Paper code: BOT-HE-6026	
Paper name: Project work/Dissertation Paper code: BOT-HE-6036	Students can gather practical knowledge on addressing relevant scientific questions through experimentation. Hands on training will help them in understanding the actual field of work.

DEPARTMENT OF CHEMISTRY (HONOURS): Programme Outcome: Students become acquainted with Chemistry and its different parts. The interest thus roused makes them to undertake further studies in the concerned subject.

Courses	Course Outcomes
Course Name: INORGANIC CHEMISTRY-I Paper Code: CHE-HC-1016	On successful completion, students would have clear understanding of the concepts related to atomic and molecular structure, chemical bonding, periodic properties and redox behaviour of chemical. 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.
Course Name: PHYSICAL CHEMISTRY I Paper Code: CHE-HC-1026	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.
Course Name: ORGANIC CHEMISTRY I Paper Code: CHE-HC-2016	Students will be able to identify different classes of organic compounds, describe their reactivity and explain/analyze their chemical and stereo chemical aspects.
Course Name: PHYSICAL CHEMISTRY II Paper Code: CHE-HC-2026	In this course the students are expected to learn laws of thermodynamics, thermochemistry, thermodynamic functions, relations between thermodynamic properties, Gibbs Helmholtz equation, Maxwell relations etc. Moreover, the students are expected to learn partial molar quantities, chemical equilibrium, solutions and colligative.
Course Name: INORGANIC CHEMISTRY-II Paper Code: CHE-HC-3016	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.
Course Name: ORGANIC CHEMISTRY-II Paper Code: CHE-HC-3026	Students will be able to describe and classify organic compounds in terms of their functional groups and reactivity.
Course Name: PHYSICAL CHEMISTRY-III Paper Code: CHE-HC-3036	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.
Course Name: INORGANIC CHEMISTRY-III Paper Code: CHE-HC-4016	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.
Course Name: ORGANIC CHEMISTRY-III	Students shall demonstrate the ability to identify and classify different types of N-based derivatives, alkaloids and hetrocyclic compounds/explain their

Paper Code: CHE-HC-4026	structure mechanism and reactivity/critically examine their synthesis and reactions mechanism.
Course Name: PHYSICAL CHEMISTRY-IV Paper Code: CHE-HC-4036	In this course the students will learn theories of conductance and electrochemistry. Students will also understand some very important topics such as solubility and solubility products, ionic products
Course Name: ORGANIC CHEMISTRY-IV Paper Code: CHE-HC-5016	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
Course Name: PHYSICAL CHEMISTRY V Paper Code: CHE-HC-5026	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.
Course Name: INORGANIC CHEMISTRY-IV Paper Code: CHE-HC-6016	By studying this course the students will be expected to learn about how ligand substitution and redox reactions take place in coordination complexes.
Course Name: ORGANIC CHEMISTRY-V Paper Code: CHE-HC-6026	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.
Course Name: ANALYTICAL METHODS IN CHEMISTRY Paper Code: CHE-HE-5026	On successful completion students will be have theoretical understanding about choice of various analytical techniques used for qualitative and quantitative characterization of samples .
Course Name: INSTRUMENTAL METHODS OF CHEMICAL ANALYSIS Paper Code: CHE-HE-5066	Students shall be able to explain the theoretical basis of different analytical techniques, identify the experimental requirements and compare/analyze the data/results thereof.
Regular	
Course Name: CHEMISTRY 1 Paper Code: CHE-RC-1016 & Paper Code: CHE-HG-1016	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, alkanes, alkenes, alkynes etc.
Course Name: CHEMISTRY 2 Paper Code: CHE-RC/HG-2016	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.
Course Name: CHEMISTRY 3 Paper Code: CHE-RC/HG-3016	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

Course Name: CHEMISTRY4 Paper Code: CHE- RC/HG-4016	After completion of this course the students learn 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.
Course Name: POLYMER CHEMISTRY Paper Code: CHE-RE-5056	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.
Course Name: GREEN CHEMISTRY Paper Code: CHE-RE-6016	Apart from introducing learners to the principles of green chemistry, this course will make them conversant with applications of green chemistry to organic synthesis. Students will be prepared for taking up entry level jobs in the chemical industry. They also will have the option of studying further in the area.

Department of Education (Honours Course): Programme outcome: Studies get to know about different aspects associated with the subject thereby leading to further studies in the concerned subject.

Course	Course Outcome
Principles of Education EDU-HC-1016	Acquaint the students with the sound principles of education to important concepts of Education, Curriculum, Democracy, Discipline and Freedom. Develops knowledge about different Aims of Education, various types of Curriculum, Correlation of Studies and Forms of Discipline. Familiarizes the students with democratic idea of modern education.
Psychology of Education EDU-HC-1026	Makes the students understand the relationship between education and psychology. Explains the need of educational psychology in teaching learning process. Describes the nature and theories of learning and role of motivation in learning and in understanding the concept of memory, forgetting, attention and interest. It familiarizes students with intelligence, its theories and measurement. And acquaints with different types of personality and the adjustment mechanism.
Development of Education In India-II EDU-HC-3016	Helps in understanding the Educational situation during the time of Independence. Explains the recommendations and educational importance of different Education Commission and Committees in post Independent India. It analyses the National Policy on Education in different times. And helps in getting accustomed with the recent Educational Development in India

<p>Educational Technology and Teaching Methods EDU-HC-3026</p>	<p>Make the students understand the objective of educational technology in teaching learning process. Acquaint the students with innovations in the field of education through technology Make the students understand about various methods and devices of teaching. Acquaint students with levels, effectiveness of teaching and classroom management Make the students understand the strategies of effective teaching as a profession.</p>
<p>Value and Peace Education EDU-HC-3036</p>	<p>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.</p>
<p>Public Speaking Skill EDU-SEC-3014</p>	<p>After completing this course, students will be able to acquire the capacities of public speaking skill.</p>
<p>Measurement and Evaluation in Education & Practical EDU-HC-5016</p>	<p>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.</p>
<p>Guidance and Counselling EDU-HC-5016</p>	<p>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 organization of guidance service and school guidance clinic Enable the learners to understand the challenges faced by the teacher as guidance worker.</p>
<p>Developmental Psychology EDU-DSE-5026</p>	<p>Enable the students to understand the basic concepts relating to development Acquaint the students about heredity and environmental factors affecting pre-natal development Enable the students to understand the development aspects during infancy and childhood Enable the students to understand the development aspects of adolescence, importance of adolescence period and problems associated with this stage.</p>

Teacher Education in India EDU-DSE-5046	<p>Explain the Concept, Scope, Aims & Objectives and Significance of teacher education</p> <p>Acquaint with the development of Teacher Education in India</p> <p>Acquaint with the different organising bodies of teacher education in India and their functions in preparation of teachers for different levels of education</p> <p>Acquaint with the innovative trends and recent issues in teacher education, and be able to critically analyse the status of teacher education in India</p> <p>Understand and conceive the qualities, responsibilities and professional ethics of teachers</p>
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Regular Course

Paper Name & Code	Course Outcome
Foundation of Education EDU-RC-1016	<p>Acquaint with the principles of education.</p> <p>Gain knowledge about different various Forms and Aims of Education.</p> <p>Understand the concept and importance of Discipline and Freedom.</p> <p>Acquire knowledge about the concept of Emotional and National Integration and International Understanding.</p>
Guidance and Counselling EDU-RC-3016	<p>Help the students to understand the concept, need and importance of Guidance and Counselling.</p> <p>Enable the students to know the different types and approaches to Guidance and Counselling.</p> <p>Acquaint the students with the organization of guidance service and school guidance clinic</p> <p>Enable the learners to understand the challenges faced by the teacher as guidance worker.</p>
Public Speaking Skill EDU-SEC-3014	After completing this course, students will be able to acquire the capacities of public speaking skill.
Developmental Psychology EDU-DSE-5026	<p>Enable the students to understand the basic concepts relating to development</p> <p>Acquaint the students about heredity and environmental factors affecting pre-natal development</p> <p>Enable the students to understand the development aspects during infancy and childhood</p> <p>Enable the students to understand the development aspects of adolescence, importance of adolescence period and problems associated with this stage.</p>
Distance Education EDU-RC-5016	<p>Enable the students to understand the concept of distance education and its growth in India and Assam.</p> <p>Acquaint the students with the growing need and importance of distance education</p> <p>Acquaint the students with the different forms and methodologies applied in distance education</p> <p>Enable the students to understand different programmes of distance education</p> <p>Acquaint the students with different instructional strategies of distance education</p>
Extension Activities EDU-SE-5014	After completing the course, students will be able to do extension activities.

DEPARTMENT OF ECONOMICS: Programme outcome: Students get to know about the categories under which Economics can be studied. It prepares the way for further studies in the subject.

COURSES	COURSE OUTCOMES
Semester -I	
Course Name: Introductory Microeconomics Paper Code: ECO-HC-1016	This paper will provide the basic principles of economics. It will emphasis student to think like an economist. The course will help the student how to illustrate microeconomic concepts and how to apply it in real life situations.
Course Name: Mathematical Methods for Economics-I Paper Code: ECO-HC-1026	From this paper student will learn the basic mathematics and its applications in economics. Student will learn the basic economic model of micro and macroeconomic theory and how to illustrate them mathematically.
Course Name: Fundamentals of Microeconomics Paper Code: ECO-HG-1016 & Course Name: Principles of Microeconomics-I Paper Code: ECO-RC-1016	From this course student intent to expose the basic principles of Microeconomics theory. The student will learn how to illustrate theories of economics and its applications. Student will get the basic idea about demand, supply, cost, production, welfare etc.
Semester -II	
Course Name: Introductory Macroeconomics Paper Code: ECO-HC-2016	This paper will introduce the basic idea of macroeconomics which is deals with aggregate economy. This paper will understand the student how to measure aggregate macroeconomic variable like savings, investment, inflation and balance of payments etc.
Course Name: Mathematical Methods for Economics-II Paper Code: ECO-HC-2026	This paper is the sequel of 1 st semester paper about basic mathematics. This paper will benefit students how to develop economic models through mathematics. Students will be able to learn the linear algebra, different functions like homogeneous and homothetic functions and applications of different market models etc.
Course Name: Microeconomic Theory Paper Code: ECO-HG-2016 & Course Name: Principles of Microeconomics- II Paper Code: ECO-RC-2016	This paper is a sequel to 1 st Semester paper. This paper will help student to get the basics of both perfect and imperfect competition. It will be able to provide the basic idea of asymmetric information of market failure, externalities etc.

Semester-III	
Course Name: Intermediate Microeconomics-I Paper Code: ECO-HC-3016	This paper provides a sound training on analysis pattern in micro economic theory especially on consumer behaviour. This paper helps the student how to use mathematical tools to facilitate the basic micro economic concept. This paper also covers the producer behaviour of a competitive firm.
Course Name: Intermediate Macroeconomics-II Paper Code: ECO-HC-3026	This paper is an introduction on open economy model. This paper introduces the student to formal modeling of a macro economy in terms of analytical tools. This paper is a discussion on various alternative theories of output and employment
Course Name: Statistical Methods for economics Paper Code: Eco-HC-3036	This paper is an introduction of some basic concepts and terminology of fundamental to statistical analysis and inference. From this paper student have an idea about sampling technique and its uses. From this paper students are able to have an idea about probability followed by probability distribution of discrete and continuous random variables and joint distribution.
Course Name: Fundamentals of Macroeconomics Paper Code: ECO-HG-3016 & Course Name: Principles of Macroeconomics- I Paper Code: ECO-RC-3016	The course introduces the basic concept of macroeconomics. From this paper student will be able to learn the measurement of various macro economic variables like GDP, consumption, savings, investment etc. Students have an idea about GDP determination in short run.
Semester -IV	
Course Name: Intermediate Microeconomics-II Paper Code: ECO-HC-4016	This paper is sequel to Intermediate Microeconomics-I. This paper will emphasize giving clarity to the student with the use of mathematical tools and reasoning. From this paper student will be able to know about general equilibrium. This paper is an introduction about market and asymmetric information and various new concepts like signaling and screening etc.
Course Name: Intermediate Macroeconomics-II Paper Code: ECO-HC-4026	This course is also sequel to previous paper Intermediate Macroeconomics-I. This paper is an introduction about long run dynamic issues like growth with technical progress. This paper will be able to provide the micro-foundations to the various aggregative concepts to the students.
Course Name: Introductory Econometrics Paper Code: Eco-HC-4036	This course provides a comprehensive introduction to basic econometric concepts and techniques. This paper will help the students to acquire the knowledge about hypothesis testing, estimation and diagnostic testing of simple and multiple regression models. It will also benefit the students for learning the consequences of various testing.

<p>Course Name: Macroeconomics Theory Paper Code: ECO-HG-4016& Course Name: Principles of Macroeconomics- II Paper Code: ECO-RC-4016</p>	<p>This paper is an introduction on open economy. This paper will helpful to students for learning aboutinflation and its relationship with unemployment. This paper is sequel to previous 3rd semester paper and it will beneficial for the students to learn about various theories of determination of national income.</p>
Semester-V	
<p>Course Name: Indian Economy-I Paper Code: ECO-HC-5016</p>	<p>This paper is helpful for any Competitive Examination appearing after graduation. From this paper student will acquire the knowledgeabout Indian Economy. Student will learn about demographic trends and issues, poverty , inequality and unemployment andmany more, Besides there is a unit on international comparisons with our neighboring countries. From this unit student will gather their knowledge on various policies adoptedby our neighboring countries.</p>
<p>Course Name: Development Economics-I Paper Code: ECO-HC-5026</p>	<p>From this paper students have an idea about development and their justification in development. Student will able to learn the various growth modelslike Harrod-Domar, Solow and others. The paper will be useful for students to know themechanism of poverty and inequality.</p>
<p>Course Name: Money and Financial Markets Paper Code: ECO-HE-5026</p>	<p>This paper will be useful for students preparing fordifferent competitive exams. From this paper student acquire knowledge on wholebanking system of India. Besides banking, this paper also includes whole financial institutions, markets, instruments and financial innovation, from where student get an ideaabout treasury bills, CP, CD , Govt. securities and many other things.</p>
<p>Course Name: Public Finance Paper Code: ECO-HE-5036</p>	<p>This paper is very helpful for students to learn aboutthe tax system prevailing in the country. From this paper students get an idea about budget andits various types. The course will be useful for students aiming towardscareers in the Govt. sector, policy analysis, business and journalism.</p>
<p>Course Name: Economic Development and Policy in India-I Paper Code: ECO-RG-5016(GE-1)</p>	<p>From this paper student will acquire knowledge on various debatable topics like poverty, unemployment,inequality etc. This paper is useful for student to learn about variouspolicies taken by Govt. and finally the centre- state financial relations. This paper is helpful for any Competitive Examination appearing after graduation</p>

Course Name: Money and Banking Paper Code: ECO-RE-5026(DSE-1)	From this paper student acquire knowledge on whole banking system of India. This course exposes students to the theory and functioning of the monetary and financial sectors of the economy. Besides students will be able to learn about money, types and its measurement.
Semester-VI	
Course Name: Indian Economy-II Paper Code: ECO-HC-6016	From this paper student will acquire knowledge on various policies adopted by the Govt. of India To gain updated knowledge on recent development in Indian economy this paper will be helpful to students.
Course Name: Development Economics-II Paper Code: ECO-HC-6026	This paper is helpful for students to know various demographic concepts like birth and death rates, age structure, fertility and mortality and many more. This paper will acquire good knowledge on environment and sustainable development. Finally from this paper student will be able to learn about globalization and its impact on various fields in the economy.
Course Name: The Economy of Assam Paper Code: ECO-HE-6016	This paper will give an idea about the relationship between economy and environment, economy and ecosystem etc. Students will be able to learn the various environmental policies adopted by the Govt. Students will be able to learn about international environmental problems like trans boundary pollution, climate change etc.
Course Name: International Economics Paper Code: ECO-HE-6026	From this paper student will be able to get the knowledge of direction and consequences of international trade. Students acquire knowledge on various trade policies adopted in international trade like tariff, quota etc. It also covers various models of open economy from where student gather their knowledge on international trade.
Course Name: Economic Development and Policy in India-II Paper Code: ECO-RG-6016(GE-2)	This course examines sector-specific trends in key indicators and their implementations in the post-Independence period. This paper is useful for student to learn about various policies taken by Govt. especially on agriculture, industry and foreign trade. This paper is helpful for any Competitive Examination appearing after graduation
Course Name: Public Finance Paper Code: ECO-RE-5036(DSE-2)	This paper is very helpful for students to learn about the tax system prevailing in the country. From this paper students get an idea about budget and its various types. The course will be useful for students aiming towards careers in the Govt. sector, policy analysis, business and journalism

DEPARTMENT OF ENGLISH: Programme outcome: It acquaints the students with the origin & development of English Literature & its sub-categories. Students are prepared for further studies through the concerned programme.

COURSES (SEMESTER –I)	COURSE OUTCOME
Paper Code: ENG-HC-1016 Course Name: Indian Classical Literature	This paper introduces students to a selection of literatures of India in English translation. 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. This paper encourages students to think laterally about literatures of the world, and the possibility of cultural exchange.
Paper Code: ENG-HC-1026 Course Name: European Classical Literature	Classical writing in Europe saw the emergence of traditions that cut across many genres, which included poetry, theatre, and general discourses. Discussions on epic and drama by Aristotle and purposefulness of creative exercise by Horace as well as divergent compositions by Sophocles and Plautus and Homer's epics show the consolidation of a rich cultural discourse. This paper aims to enrich students through the study of representative texts belonging to the Classical Period.
Paper Code: English Course Name: Communication ENG-AE-1014	Communication is a skill which involves systematic and continuous process of speaking, listening and understanding. English is acknowledged passport to better education and employment opportunities. English language plays a crucial role to weave the world into a single thread. The aim of the paper is to develop English communication skills of the students.
Paper 4: English I Paper Code: ENG-CC-1016	The aim of this paper is to provide the student an opportunity to respond to representations of issues in contemporary life and culture. This paper deals with prose pieces written by Indian, British, American and diasporic writers. This paper also has a grammar section.
Paper Code: ENG-HG-1026 Course Name: Individual and Society	The aim of this paper is to understand the relationship between the individual writer and the society and to develop skill in analyzing the author's representation of society and the individual in interaction and write critiques drawing out. It also helps students to learn to distinguish between literary representation and actual character and milieu.
COURSES (SEMESTER –II)	COURSE OUTCOME
Paper Code: ENG-HC-2016 Course Name: Indian Writing in English	This paper on Indian writing in English introduces students to the historical development of this body of writing – the challenges faced by early writers, the growing sense of accomplishment in the writing of different forms and the interpretation of individual and collective experience in colonial and postcolonial India.
Paper Code: ENG-HC-2026 Course Name: British Poetry and Drama: 14 th to 17 th centuries	This paper aims to familiarize the students with the two major forms in British literature from the 14 th to the 17 th centuries – poetry and drama, apart from acquainting them with the contexts that generated such literatures..
Course Name: English II Paper Code: ENG-CC-2016	The aim of this paper is to provide the student an opportunity to respond to representations of issues in contemporary life and culture. This paper deals with poetry pieces written by Indian, British and American writers. This paper also has a grammar section.

Course Name: ENG-HG-2026 Course Name: Modern Indian Literature	The Modern Indian literature comprise extensive writings in all genres in many languages. The different historical and cultural backgrounds of the various Indian languages and literatures add to the complexity of what is termed as Modern Indian languages and Literatures. The list of short stories and poems prescribed for this course give the student a taste of Indian writing from different regions of the country.
COURSES (SEMESTER –III)	COURSE OUTCOME
Paper Code: ENG-HC-3016 Course Name: History of English Literature and Forms	This paper introduces students to the history of English Literature and the major literary forms. It adopts a chronological approach to the study of poetry, drama, fiction and non-fictional prose, showing the development of each form as it moves through the various periods of English literature and its expansion into global English writing.
Paper Code: ENG-HC-3026 Course Name: American Literature	This paper seeks to acquaint 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 and change. A study of this 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.
Paper Code: Eng-HC-3036 Course Name: British Poetry and Drama: 17 th and 18 th Centuries	This paper aims to familiarize the students with British literature in the 17 th and 18 th centuries, a time-period which sees the emergence and establishment of greatly diverse kinds of writings.
Paper Code: ENG-HG-3026 Course Name: British Literature	This paper is designed to offer a representative sampling of the major literary traditions of British life and culture through a study of texts in different genres.
Paper Code: ENG-SE-3014 Course Name: Creative Writing	The students in this paper will focus on three creative genres: fiction, non-fiction and poetry. The emphasis will be to build proficiency in readings and writings. The course encourages active class participation and lots of writings.
Courses (SEMESTER IV)	Course outcomes
Paper Code: ENG-HC-4016 Course Name: British Literature: The 18 th Century	This paper aims to introduce students with British Literature in the 18 th century, an age in which reason and rationality was reflected in its literature including prose, poetry, fiction and non-fiction. The texts in the course provide a glimpse to the writings of the era.
Paper Code: ENG-HC-4026 Course Name: British Romantic Literature	This paper acquaints the students to the Romantic imagination of the 18 th century poetry of Wordsworth, Keats, Blake, Shelley, Coleridge and Burns. This paper enables the students to have a better idea about nature and human relationships and the role of nature in inspiring poets to create poetry.
Paper Code: ENG-HC-4036 Course Name: British Literature: The 19 th Century	This paper explores the literature of the 19 th century such as novels and poetry. The texts selected shall acquaint the students with the Victorian social issues of that era through the novels of Dickens, Jane Eyre and Austen whereas Rossetti's work exposes gender issues of the age.

Paper Code: ENG-HG-4016 Course Name: Language, Literature and Culture	This paper acquaints the students to the relationship between language, literature and culture. To make known the usage of language in literature and in everyday communication. Students will be familiarized with the concepts of speech, dialect, diglossia, figures of speech, point of view, and rhetoric etc.
Paper Code: ENG-SE-4014 Course Name: Translation: Principles and Practice	This Paper is designed to offer students basic skills in translation. It also aims at providing them practical training in translation through audio-visual medium such as plays, poem. The paper will also introduce the students to intralingual, interlingual and interspecific translation.
COURSES (SEMESTER V)	COURSE OUTCOME
Paper Code: ENG-HC-5016 Course Name: British Literature: The 20 th Century	This paper introduces the students with the works of modernist writers rich with new forms of exploration in form, style, and narrative technique such as stream of consciousness.
Paper Code: ENG-HC-5026 Course Name: Women's Writing	This paper explores the writings of women and their experiences in various genres- poetry, novels, short stories and autobiographical. It aims to seek student's attention towards women's role in political as well as social context.
Paper Code: ENG-HE-5036 Course Name: Literature of the Indian Diaspora	This paper focuses on the literature of the Diaspora dealing with the themes of identity, alienation, exile, displacement and so on. The paper looks into the diasporic condition with particular reference to Indian diasporic writers and the effects of globalization in a post-colonial scenario.
Paper Code: ENG-HE-5056 Course Name: Literary Criticism and Literary Theory	This paper familiarizes the students with literary theory such as Feminism, Deconstruction, Post-Colonialism and the literary interpretations of Wordsworth, Coleridge and so on. The students are acquainted with the ideas of identity, race, ethnicity, and gender in this paper.
COURSES (SEMESTER VI)	COURSE OUTCOME
Paper Code: ENG-HC-6016 Course Name: Modern European Drama	This paper introduces the students to the innovative dramatic works of the modern period and highlighting the emergence of avant garde movements. It introduces ideas such as Existentialism, alienation in the medium of theatre.
Paper Code: ENG-HC-6026 Course Name: Postcolonial Literatures	This paper offers insight into the postcolonial literature across the world by focusing on the regional, cultural differences, post-colonial experiences on the colonized.
Paper Code: ENG-HE-6036 Course Name: Partition Literature	This paper familiarizes the student's with the literature of partition through the writings of Amitav Ghosh, Saadat Hasan Manto depicting the psychological effects of partition.
Paper Code: ENG-HE-6046 Course Name: Travel Writing	The paper aims at showcasing the genre of travel narrative of Ibn Batuta, Al Biruni, Mark Twain, Che Guevara, Vikram Seth and Elisabeth Bumiller to create interest amongst the students about travel narrative and literature.

Department of History (Honours): It makes the students aware about the history of the nation, state as well as the world and the developments which have taken place in historical studies. This course provides the ground work for further studies in the subject.

Courses (SEMESTER I)	Course outcomes
Paper Code: HIS-HC-1016: Course Name: History of India-I (Earliest time to 300BC)	After the completion of this paper, the students will be able to explore and effectively use historical tools in reconstructing the remote past of Ancient Indian pre and proto history. The course will also analyse the various stages of evaluation of human culture and the belief systems in the proto-history period.
Paper Code: HIS-HC-1026: Social Course Name: Formation and Cultural Patterns of the Ancient World.	After the completion of this paper, the students will be able to explain the processes and stages of evaluation of the variety of cultural pattern throughout antique.
Courses (SEMESTER II)	Course outcomes
Paper Code: HIS-HC-2016: Course Name: History of India-II (BCE. 300-750)	On successful completion of this course the students will be able to explain the economic and socio-cultural connections, transitions and stratifications during the ruling hours, empires and the politico-administrative nuances of early Indian History from 300 BCE to 300 CE.
Paper Code: HIS-HC-2026: Social Course Name: Formation and Cultural Patterns of the Mediaeval World.	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 Mediaeval World. They will be able to describe the emergence, growth and decline of various politico-administrative and economic and economic patterns and resultant changes therein.
Courses (SEMESTER III)	Course outcomes
Paper Code: HIS-HC-3016: Course Name: History of India-III (C. 750-1206)	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. 750 to 1206. They will be able to analyse India's interaction with another wave of foreign influence and the changes brought in its wake in the period.
Paper Code: HIS-HC-3026 Course Name: Rise of the Modern West-I	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 16th. Century CE. They will be able to explore and analyse the significant historical shifts and events and the resultant effects on the the civilization of Europe in the period.
Paper Code: HIS-HC-3036: Course Name: History of India-IV (C. 1206-2550)	After completion of this course students will be able to explain the political and administrative history of Mediaeval period of India from 1206 to 1550 AD. They will also be able to analyse the sources of history, regional variations, social, cultural and economic set up of the period.
Courses (SEMESTER IV)	Course outcomes

Paper Code: HIS-HC-4016 Course Name: Rise of the Modern West-II	After the completion of this course, the students will be able to explain the political and intellectual currents in Europe in the Modern Age. They will also be able to relate the circumstances and casual factors of the intellectual and revolutionary currents of both Europe and America at the beginning of the Modern Age.
Paper Code: HIS-HC-4026: Course Name: History of India-V (C.1550-1605)	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. They will also be able to describe the inter relationships between the economy, cultural and religious practices of the period.
Paper Code: HIS-HC-4037: Course Name: History of India-VI(C. 1605-1750)	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. As a whole, this course will enable them to relate to socio-economic and religious orientation of the people of Mediaeval period in India.
Courses (SEMESTER V)	Course outcomes
Paper Code: HIS-HC-5016: Course Name: History of Modern Europe-I ((C. 1780-1939)	After the completion of this course the students will be able to evaluate the historical evaluation and political developments that occurred in Europe in the period between 1780-1939. They will also be able to critically analyse the evaluation of social classes, nation states, evaluation of capitalism and nationalist sentiment in Europe. They will also be able to relate to the variety of causes that dragged the world into devastating wars in the intervening period.
Paper Code: HIS-HC-5026: Course Name: History of India-VII(C. 1780-1857)	After the completion of this course, the students will be able to relate the circumstances leading to the consolidation of colonial rule over India and their consequences. They will also be able to explain the orientation of indigenous population and the masses towards resistance to the colonial exploitation. The course will also enable the students to analyse popular uprising among the tribal, peasant and common people against the British policies.
Courses (SEMESTER VI)	Course outcomes
Paper Code: HIS-HC-6016: Course Name: History of India-VIII(C. 1857-1950)	At the completion of this course, the learners will be able to analyse the course of British Colonial exploitation, the social mobilization during the period between c.1857-1950 and also the techniques of Indian resistance to British policies. It will also be able to enable the students to explain the circumstances leading to de-colonization and also the initial period of nation building in India.
Paper Code: HIS-HC-6026: Course Name: History of Modern Europe-II (C. 1780-1939)	After the completion of this course, the students will be able to analyse the historical developments in Europe between c.1780 to 1939. As the course structure of this paper focuses on the democratic and socialist foundations modern Europe. The students will also 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.

History (Regular)

Courses (SEMESTER I)	Course outcomes
Paper Code: HIS-RC-1016: Course Name: History of India from Earliest times up to c.1206	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. They will be able to understand that changes and transformation in polity, economy and society in early Indian and the linkage developed through contacts with the outside world.
Courses (SEMESTER II)	Course outcomes
Paper Code: HIS-RC-2016 Course Name: Early Assam up to c.1228	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. Upon completion, Students will be acquainted with major stages of developments in the political, social and cultural history of Assam during the early times.
Courses (SEMESTER III)	Course outcomes
Paper Code: HIS-RC-3016: Course Name: History of India (c.1206-1757)	Upon completion of this course, Students will be able to analyse the political and social developments in India between 1206-1757. Students will be able to explain the formation of different States during this period along with their administrative apparatuses, and the society, economy and culture of India in the 13th. to mid 18th. Century period.
Paper Code: HIS-SE-3014: Course Name: Historical Tourism in North East India	After completing the course, the students will be able to explain Tourism in North India with special reference to the historical monuments, culture and ecological elements and places of the North East India country as tourist and heritage site of the nation. They will be able to relate the growing vocation of tourism as an industry and the applicability of historical knowledge for its growth.
Courses (SEMESTER IV)	Course outcomes
Paper Code: HIS-RC-4016: Course Name: History of Assam (c. 1228-1826)	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. This paper will also enable the students 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.
Courses (SEMESTER V)	Course outcomes
Paper Code: HIS-RE-5016: Course Name: History of India (c.1757-1947)	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. They will also be able 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.
Paper Code: HIS-RG-5016 Course Name: History of Europe (c. 1648-1870)	After completing the course the students will be able to explain the emergence of the State system in Europe and the rise of modernity. They will also be able to analyse the revolutionary upheavals of Europe that finally shaped

	the world.
Courses (SEMESTER V)	Course outcomes
<p>Paper Code: HIS-RG-6016 Course Name: History of Europe (c. 1870-1939)</p>	<p>After completing the course the students will be able to explain the major political developments in Europe from 1870 to 1939. The students will be able to delineate how the rise of two unified nations of Germany and Italy gave rise of intense imperialist contest the world over. The course will also enable the students to analyse the causes and consequences of World War-I and developments leading to World War-II.</p>
<p>Paper Code: HIS-RE-6016 Course Name: History of Assam (c. 1826-1947)</p>	<p>After completion of this course, the students will be able to describe the period of British rule in Assam after its annexation by the imperialist forces. They will also be able to situate the development of nationalism in Assam and its role in India's freedom struggle. The course will enable the students to analyse the main currents of political and socio-economic developments in Assam and during the colonial period.</p>

Department of Mathematics: Programme outcome: This programme gives knowledge about the fundamentals of Mathematics and Mathematics as a genre of studies which in turn prepares the students for further study in the concerned subject.

Course	Outcomes
Course Name: Calculus Paper Code: (MAT-HC-1016) (MAT-HG-1016/MAT-RC-1016) (MAT-HC-4016)	To inculcate knowledge on the ability to find the effects of changing condition on a system.
Course Name: Differential equation Paper Code: (MAT-HC-2026)(MAT-HG-3016/MAT-RC-3016)	To inculcate knowledge on solving of first and second order differential equations and basic information algebraic structure using laplace.
Course Name: Analytical geometry Paper Code: (MAT-HC-3036)(MAT-HG-1016)	To inculcate knowledge on solve problems in analytical geometry and able to find appropriate solutions for given problems.
Course Name: Combinatorics and graph theory Paper Code: (MAT-SE-3024)	Able to learn about the counting principles, permutations and combinations, pigeonhole principle, understand the basic of graph theory and learn about social networks.
Course Name: Numerical methods Paper Code: (MAT-HC-4026)	To inculcate knowledge on algebraic equations solved by numerical methods. this will enable the students to learn some numerical methods to find the zeroes of nonlinear functions of a single variable and solution of a system of linear equations to know about methods to solve systems linear equation, interpolation techniques to compute the values for a tabulated functions at points not in the table, applications of numerical differentiation and integration to convert differential equation into difference equation for numerical solution.
Course Name: R programming Paper Code: (MAT-SE-3014)	Able to become familiar with R syntax and to use R as a calculator , understand the concepts of objects, vectors and data types, know about summary commands and summary table in R, visualize distribution of data in R and learn about normality test, plot various graphs and chart using R
Course Name: Probability and statistics Paper Code: (MAT-HE-5036)	This course will enable the students to make the students familiar with the basics statistical concepts and tools which are needed to study situations involving uncertainly or randomness to render the students to several examples and exercise that blend their everyday experience with their scientific interests.
Course Name: Programing in C Paper Code: (MAT-HE-5066)	On successful completion of this subject the students have the programming ability in C language.
Course Name: Partial differential equation Paper Code: (MAT-HC-6026)	Students will enable to formulate, classify and transform first order PDE into canonical form, learn about methods of characteristics and separation of variable to solve first order PDEs, classify and solve second order PDEs learn about Cauchy problems for second order PDE and homogeneous as well as non-homogeneous wave equation apply the method of separation of variables for solving second order PDEs.
Course Name: Rigid dynamics Paper Code: (MAT-HE-6016)	Able to learn introduce moments and products of inertia theorem of six constant, D Alembert principle, motion of a body in two dimension and Lagranges equation.

Course Name: Real analysis Paper Code: (MAT-HC-2016) (MAT-HG-4016/MAT-RC-4016) (MAT-HC-3016) (MAT-HC-5016)	To inculcate knowledge on real numbers and their properties and able to understand the concept of sequence of real numbers, infiniteseries and their related results.
Course Name: Modern algebra Paper Code: (MAT-HC-3026) (MAT-HC-4036) (MAT-HE-6056)	To inculcate knowledge on various algebraic structure and their properties.
Course Name: Complex analysis Paper Code: (MAT-HC-6016)	To inculcate knowledge on complex numbers and their properties to introduce the basic ideas of analysis for complex functions with visualization through relevant practicals
Course Name: Number theory Paper Code: (MAT-HE-5016/MAT-RE-5016)	The course will enable the students to learn about some fascinating discoveries related to the properties of prime number and some of the open problems in number theory, viz, know about number theoretic functions and modular arithmetic, solve linear, quadratic and system of linear congruence equations.

DEPARTMENT OF NEPALI: Programme Outcome: This Programme which is studied as AECC, GE & MIL makes the students familiar with Nepali linguistics & Literature thereby preparing students desiring further studies in Nepali.

Course	Outcome
AECC	A compulsory paper introduced as AECC for students desirous of studying Nepali, it includes linguistics of Nepali language.
NEP-CC-3016 नेपाली आख्यान	Students are acquainted with Nepali short stories
NEP-CC 4016 समकालीन नेपाली कविता र रियनका विवेक	Students get to know about the trends in contemporary Nepali poetry.
NEP-GE 5016 शोधपत्र एवम् पत्रयोजनापत्र लेखन	Students get to know about the approach to research methodology
NEP-RG 6016 नेपाली बाल साहित्य	Students get to know about Nepali Children literature

DEPARTMENT OF PHILOSOPHY: Programme Outcome: Acquaints the students about Philosophy as having ancient origins and have an analytical view of life. The different perspective of the study of philosophy prepares the students for further study in the concerned subject.

Courses	Courses Outcomes
Paper Code: PHI-HC-1016 Course Name: Indian Philosophy (The Vedas, Upanishads, Bhagavad-Gita, Different schools of Indian Philosophy and their teachings)	To get an ability to search for the truth through thinking and speculation, about life and reality.
Paper Code: PHI-HC-1026 Course Name: Logic (propositions and Arguments, Truth and Validity, Deduction and induction)	Creates an ability to evaluate arguments and reasoning. Helps the Critical thinking as the process of evaluation to separate truth from falsehood, and reasonable from unreasonable belief itself.
Paper Code: PHI-HC-2036 Course Name: Greek Philosophy (from Thales to Aristotle)	To introduce with the philosophies of the ancient Greece that influenced much of Western culture.
Paper Code: PHI-HC-2046 Course Name: Logic (Symbolic logic)	Gives the basic concept of Symbolic logic of Mathematical logic
Paper Code: PHI-HC-3056 Course Name: Western Philosophy (From Philosophy of Descartes to Hegel)	It enables the students to know about thinking of the Western philosophers and their system buildings.
Paper Code: PHI-HC-3076 Course Name: Ethics (General concepts of Ethics)	To introduce with the general concepts of Ethics.
Paper Code: PHI-HC-4086 Course Name: Contemporary Indian philosophy (Philosophies of Aurobindo, Radhakrishnan, Gandhi, and Vivekananda)	Enables the students to know about the philosophical thinking of the great Indian thinkers about the human life and reality.
Paper Code: PHI-HC-4096 Course Name: Philosophy of Religion (Proofs for the existence of god, faith and revelation, Freedom of will, Immortality of the soul, Religious language and symbolism)	After the completion of this paper student will be able to know how we can see the religious viewpoints scientifically.
Paper Code: PHI-HC-4106 Course Name: Political and Social philosophy (Rights and Duties, Equality and liberty, Political ideologies, Forms of government, corruption, violence, genocide, gender discrimination, Women Empowerment, caste discrimination, female foeticide, Gandhi and Ambedkar)	To know about social and political aspects of our society.
Paper Code: PHI-HC-5116 Course Name: Analytic Philosophy (Philosophies of Moore, Refutation of Idealism, Russell's Logical atomism, Wittgenstein's philosophy of language)	To give clarity and precision of moral concepts, often making use of formal logic, conceptual analysis and some degree, mathematics and the natural sciences.
Paper Code: PHI-HC-5126 Course Name: Phenomenology and Existentialism (Kierkegaard, Sartre, Heidegger, Husserl)	To introduce with the phenomenological standpoint to the reality, and different interpretations of human life from the standpoint of our own existence in the world.

Paper Code: PHI-HC-6136 Course Name: Philosophy of Mind (Psychology and philosophy of mind, problem of Cartesian dualism, Parallelism, Occasionalism, Epiphenomenalism, behaviorism, personal identity)	Enables the students to think critically about human mind.
Paper Code: PHI-HC-6146 Course Name: Meta Ethics (ethics and meta ethics, G.E. Moore, Ayer and Stevenson, R.M. Hare)	Makes students to understand about the nature of ethical properties, statements, attitudes, and judgments.
Paper Code: PHI-HC-5016 Course Name: Philosophy of Upanishads (Relations to Vedas, general social conditions, Diversity of theories, Ultimate reality, Individual destiny)	To give the Upanisadic interpretations about the general social conditions, Ultimate reality and Individual.
Paper Code: PHI-HC-5026 Course Name: Philosophy of the Gita (Law of Karma, Ksetra-Ksetranja, pususa-prakriti, Uttama Purusa and Ultimate Reality, Conception of Yoga, Svabhava, svakarma, Svadharma, Niskamakarmayoga, lokasagraha, liberation)	To introduce the basic ideas and theories of The Gita.
Paper Code: PHI-HC-6066 Course Name: Applied Ethics (Introduction, Environmental Ethics, Cyber Ethics, bio-medical ethics)	To introduce how can we apply the moral considerations in our practical world.
Paper Code: PHI-RC-1016 Course Name: General Philosophy (Introduction, Substance, causality, Space and Time, Problem of knowledge, Relation of god and the world, proofs for the existence of god, Theories of truth),	To know what the primary sources of human knowledge are, how can we testify the truth of propositions or statements, about the existence of God and its relation with the world.

DEPARTMENT OF PHYSICS: Makes the students aware about the dynamics of the study of Physics and prepares them for future endeavours in this field.

Course Name and code	Outcome
PAPER CODE: PHY-HC-1016 PAPER NAME : Mathematical Physics I	Successful students should be able to understand vector and its applications in various fields, differential equations and its applications, different coordinate systems, concept of probability and error.
PAPER CODE : PHY-HC-1026 PAPER NAME : Mechanics	On successful completion of the course students should be able to understand Inertial and non inertial reference frames, Newtonian motion, Galilean transformations, projectile motion, work and energy, Elastic and inelastic collisions, motion under central force, simple harmonic oscillations, special theory of relativity.
PAPER CODE : PHY-HG-1016 (PHY-RC-1016) PAPER NAME : Mechanics	Upon completion of this course, students are expected to understand the role of vectors and coordinate systems in Physics, solve Ordinary Differential Equations, laws of motion and their application to various dynamical situations, Inertial reference frames their transformations, concept of conservation of energy, momentum, angular momentum and apply them to basic problems, phenomenon

	of simple harmonic motion, motion under central force, concept of time dilation, Length contraction using special theory of relativity. In the laboratory course, after acquiring knowledge of how to handle measuring instruments (like screw gauge, Vernier calipers, travelling microscope) student shall embark on verifying various principles and associated measurable parameters.
PAPER CODE: PHY-HC-2016 PAPER NAME : Electricity & Magnetism	After successful completion of this course, students will be able to Understand electric and magnetic fields in matter, Dielectric properties of matter magnetic properties of matter, electromagnetic induction, applications of Kirchhoff's law in different circuits, applications of network theorem in circuits
PAPER CODE: PHY-HC-2026 PAPER NAME: Waves & Optics	After successful completion of this course, students will be able to Understand superposition of harmonic oscillations, different types of wave motions, superposition of harmonic waves, interference and interferometer, diffraction, holography.
PAPER CODE: PHY-HG-2016 (PHY-RC-2016) PAPER NAME: Electricity & Magnetism	Upon completion of this course, students are expected to apply Gauss's law of electrostatics to solve a variety of problems, calculate the magnetic forces that act on moving charges and the magnetic fields due to currents, have brief idea of magnetic materials, understand the concepts of induction, and apply them to solve variety of problems. In the Lab course, students will be able to measure resistance (high and low), Voltage, Current, self and mutual inductance, capacitor, strength of magnetic field and its variation, study different circuits RC, LCR etc
PAPER CODE: PHY-HC-3016 PAPER NAME: Mathematical Physics II	After successful completion of the course, students will be able to solve differential equation using power series solution method, solve differential equation using separation of variables method, special integrals, different properties of matrix, Fourier series.
PAPER CODE: PHY-HC-3026 PAPER NAME: Thermal Physics	Upon successful completion, students will have the knowledge and skills to identify and describe the statistical nature of concepts and laws in thermodynamics, in particular: entropy, temperature, Thermodynamics-potentials, Free energies, Maxwell's relations in thermodynamics, behaviour of real gases.
PAPER CODE: PHY-HC-3036 PAPER NAME: Digital Systems & Applications	After successful completion of the course student will be able to understand the working principle of CRO, develop a digital logic and apply it to solve real life problems, Analyze, design and implement combinational logic circuits, Classify different semiconductor memories, Analyze, design and implement sequential logic circuits, Analyze digital system design using PLD, Simulate and implement combinational and sequential circuits.

<p>PAPER CODE: PHY-HG-3016 (PHY-RC-3016) PAPER NAME: Physics & Statistical Mechanics</p>	<p>Upon completion of this course, students are expected learn the basic concepts of thermodynamics, the first and the second law of thermodynamics, the concept of entropy and the associated theorems, the thermodynamic potentials and their physical interpretations, Maxwell's thermodynamic relations, fundamentals of the kinetic theory of gases, Maxwell-Boltzman distribution law, equipartition of energies, mean free path of molecular collisions, viscosity, thermal conductivity, diffusion and Brownian motion, black body radiations, Stefan- Boltzmann's law, Rayleigh-Jean's law and Planck's law and their significances, quantum statistical distributions, viz., the BoseEinstein statistics and the Fermi-Dirac statistics. In the laboratory course, the students will be able to Measure of Planck's constant using black body radiation, determine Stefan's Constant, coefficient of thermal conductivity of a bad conductor and a good conductor, determine the temperature coefficient of resistance, study variation of thermos-emf across two junctions of a thermocouple with temperature etc.</p>
<p>PAPER CODE:PHY-SE-3014 PAPER NAME: Physics Workshop Skills</p>	<p>The aim of this course is to enable the studentsto familiar and experience with various mechanical and electrical tools through hands-on mode.</p>
<p>PAPER CODE: PHY-SE-3024 PAPER NAME: COMPUTATIONAL PHYSICS SKILLS</p>	<p>The aim of this course is not just to teach computer programming and numerical analysisbut to emphasize its role in solving problems in Physics. Highlights the use of computational methods to solvephysical problems Use of computer language as a tool in solving physics problems(applications) Course will consist of hands on training on the Problem solving on Computers.</p>
<p>PAPER CODE: PHY-HC-4016 PAPER NAME: Mathematical Physics III</p>	<p>Course Outcome: On successful completion of the course students will able to solve complex integrals using residue theorem, apply Fourier and Laplace transforms in solving differential equations, understand properties of Tensor like Transformation of coordinates, contravariant and co-variant tensors, indices rules for combining tensors.</p>
<p>PAPER CODE: PHY-HC-4026 PAPER NAME: Elements of Modern Physics</p>	<p>On completion of the course students will be able to understand modern development in Physics, Starting from Planck's law, it development of the idea of probability interpretation and the formulation of Schrodinger equation. Students will also get preliminary idea of structure of nucleus, radioactivity Fission and Fusion and Laser.</p>

<p>PAPER CODE:PHY-HC-4036 PAPER NAME: Analog Systems & Applications</p>	<p>On successful completion of the course students will be able to understand about the physics of semiconductor p-n junction and devices such as rectifier diodes, zener diode, photodiode etc. and bipolar junction transistors, transistor biasing and stabilization circuits, the concept of feedback in amplifiers and the oscillator circuits, students will also have an understanding of operational amplifiers and their applications</p>
<p>PAPER CODE:PHY-HG-4016 (PHY-RC-4016) PAPER NAME: Waves& Optics</p>	<p>Upon completion of this course, students are expected to understand Simple harmonic oscillation and superposition principle, importance of classical wave equation in transverse and longitudinal waves and solving a range of physical systems on its basis, concept of normal modes in transverse and longitudinal waves: their frequencies and configurations, interference as superposition of waves from coherent sources derived from same parent source, Demonstrate understanding of Interference and diffraction experiments, Polarization. In the laboratory course, student will gain hands-on experience of using various optical instruments and making finer measurements of wavelength of light using Newton Rings experiment, Fresnel Biprism etc. Resolving power of optical equipment, the motion of coupled oscillators, study of Lissajous figures and behaviour of transverse, longitudinal waves.</p>
<p>PAPER CODE: PHY-SE-4014 PAPER NAME: BASIC INSTRUMENTATION SKILLS</p>	<p>This course is to get exposure with various aspects of instruments and their usage through hands-on mode. Experiments listed below are to be done in continuation of the topics.</p>
<p>PAPER CODE: PHY-SE-4024 PAPER NAME: Research & Technical Writing</p>	<p>On successful completion of the course students will be able to identify and write different parts of technical reports, write article, thesis, and presentation in latex, create chart in Microsoft excel, use different format of chart based on need, plot data from different sources using Origin plot.</p>
<p>PAPER CODE:PHY-SE-4034 PAPER NAME: Domestic and Industrial Electrical Wiring</p>	<p>After successfully completion of the 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.</p>
<p>PAPER CODE: PHY-SE-4044 PAPER NAME: Photoshop</p>	<p>On successful completion of the course students will be able to work with the tools in Adobe Photoshop CC, crop image in Adobe Photoshop CC, to resize an image for print and digital media in Adobe Photoshop CC, apply Photoshop filters in print and digital media, apply filters to sharpen the images, different types of brushes used for digital painting.</p>

<p>PAPER CODE:PHY-SE-4074 PAPER NAME: RENEWABLE ENERGY AND ENERGY HARVESTING</p>	<p>The aim of this course is not just to impart theoretical knowledge to the students but to provide them with exposure and hands-on learning wherever possible</p>
<p>PAPER CODE:PHY-SE-4084 PAPER NAME: Introduction to Corel Draw</p>	<p>On successful completion of the course students will be able to work with layers and symbols in CorelDRAW, Apply fills and outlines to illustrations in CorelDRAW, Use, edit, and create artistic and paragraph text in CorelDRAW, Create boundaries to objects and copy and clone the effect of one object to another in CorelDRAW, Import and export projects, Print objects/documents created on Corel DRAW.</p>
<p>PAPER CODE: PHY-HC-5016 PAPER NAME: Quantum Mechanics & Applications</p>	<p>On successful completion of the course students will be able to understand the principles in quantum mechanics, such as the Schrödinger equation, the wave function, the uncertainty principle, stationary and non-stationary states, time evolution of solutions, as well as the relation between quantum mechanics and linear algebra. Students will be able to solve the Schrödinger equation for hydrogen atom. Students will have the concepts of angular momentum and spin, as well as the rules for quantization and addition of these, spin-orbit coupling and Zeeman Effect</p>
<p>PAPER CODE: PHY-HC-5026 PAPER NAME: Solid State Physics</p>	<p>On successful completion of the course students should be able to explain the main features of crystal lattices and phonons, understand the elementary lattice dynamics and its influence on the properties of materials, describe the main features of the physics of electrons in solids; explain the dielectric ferroelectric and magnetic properties of solids and understand the basic concept in superconductivity.</p>
<p>PAPER CODE: PHY-HE-5036 PAPER NAME: Advanced Mathematical Physics I</p>	<p>Upon completion of this course, students will be able to solve problems in Physics related to Linear Vector space, Matrix algebra, Tensor.</p>

PAPER CODE: PHY-HE-5056 PAPER NAME: Nuclear and Particle Physics	Upon completion of this course, students will have the understanding of the sub atomic particles and their properties. They will gain knowledge about the different nuclear techniques and their applications in different branches of Physics and societal application. The course will develop problem based skills and the acquire knowledge can be applied in the areas of nuclear, medical, archeology, geology and other interdisciplinary fields of Physics and Chemistry.
PAPER CODE: PHY-HC-6016 PAPER NAME: Electromagnetic Theory	On successful completion of the course students will acquire the concepts of Maxwell's equations, propagation of electromagnetic (EM) waves in different homogeneous-isotropic as well as anisotropic unbounded and bounded media, production and detection of different types of polarized EM waves, general information as wave guides and fibre optics.

PAPER CODE: PHY-HC-6026 PAPER NAME: Statistical Mechanics	On successful completion of the course students will be learn the techniques of Statistical Mechanics to apply in various fields including Astrophysics, Semiconductors, Plasma Physics, Bio-Physics, Chemistry and in many other directions.
PAPER CODE: PHY-HE-6016 PAPER NAME: Communication Electronics	Upon completion of this course, students will have the concepts of electronics in communication, details of communication techniques based on Analog Modulation, Analog and digital Pulse Modulation including PAM, PWM, PPM, ASK, PSK, FSK, overview of communication and Navigation systems such as GPS and mobile telephony system.
PAPER CODE: PHY-HE-6026 PAPER NAME: Digital Signal Processing	Upon completion of this course, students will be able to this paper describes the discrete-time signals and systems, Fourier Transform Representation of Aperiodic Discrete-Time Signals. This paper also highlights the concept of filters and realization of Digital Filters. At the end of the syllabus, students will develop the understanding of Discrete and fast Fourier Transform.
PAPER CODE: PHY-HE-6036 PAPER NAME: Advanced Mathematical Physics II	Upon completion of this course, students will be able to apply the concepts of Calculus of Variations, Group Theory and Probability Theory to solve numerical problems in Physics.
PAPER CODE: PHY-HE-6046 PAPER NAME: Astronomy and Astrophysics	Upon completion of this course, students will be able to understanding the origin and evolution of the Universe. The course will give a comprehensive introduction on the measurement of basic astronomical parameters such as astronomical scales, luminosity and astronomical quantities. It will give an overview on key developments in observational astrophysics. Students will have the idea of the instruments implemented for astronomical observation, the formation of planetary system and its evolution with time, the physical properties of Sun and the components of the solar system; and stellar and interstellar components of our Milky Way galaxy. Students will have the understanding of the origin and evolution of galaxies, presence of dark matter and large scale structures of the

	Universe
PAPER CODE: PHY-HE-6056 PAPER NAME: PHYSICS-DSE: CLASSICAL DYNAMICS	Upon completion of this course, students will have the overview of Newton's Laws of Motion, Special Theory of Relativity by 4-vector approach and fluids. Students will also have the understanding of the Lagrangian and Hamiltonian of a system. By the end of this course, students will be able to solve the seen or unseen problems/numericals in classical mechanics.

Department of Political Science: Students get to understand about the theories and concepts about political science, administration in the grass root & administrative levels thereby making them to take up further studies in the concerned subject.

Papers Code & Name of the Papers	Course Outcomes
POL HC 1016 Understanding Political Theory	To Introduce the idea of political theory and various approaches To enable the students to assess the contemporary trends of political theory To reconcile theory and practice in relation to democracy
POL HC 1026 Constitutional Government and Democracy in India	To acquaint students with constitutional design of state structures and institutions To understand the conflicts in constitutional provisions To make them comprehend the state institutions in relation to extra constitutional environment.
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 limitation
POL HC 2016 Political Theory Concepts and Debate	Understand the various concepts in political theory and appreciate how they can be helpful to analyze crucial political issues Understand the significance of debates in political theory in exploring multiple perspectives to concepts, ideas and issues. Appreciate how these concepts and debates enrich political life and issues surrounding it.
POL HC 2026 Political Process in India	Understand the working of major political institutions in India. Understand the major debates in Indian politics along the axes of caste, gender, region and religion Understand the changing nature of the Indian state and the contradictory dynamics of modern state power
POL HG 2016 Indian Government and Politics	Appreciate the approaches to the study of Indian politics and the changing nature of the state. Understand the basic features of the Indian constitution and its institutional functioning Examine the changing role of caste, class and patriarchy and their impact on politics Understand the dynamics of social movements in India.
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 behavior.

POL HC 3026 Perspectives on Public Administration	To enable students to learn the basic concepts related to public administration and its importance. To make students learn the major theories of 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.
POL HC 3036 Perspectives on International Relations and World History	To make students understand the key theoretical approaches in International 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.
POL SE 3014 Parliamentary Procedures and Practices	To help students in understanding the practical approaches to legislative 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.
POL HG 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.
POL HC 4016 Political Processes and Institutions in Comparative Perspective	To understand, comprehend and analyze the complex nature and functioning of the political systems, political institutions and corresponding issues to these both in a country specific case of India and cross-country perspectives To demonstrate critical thinking about key issues of political system of different forms, political process and public policy.
POL HC 4026 PUBLIC POLICY AND ADMINISTRATION IN INDIA	To use the contents and sub-units of the course as yard sticks for comparing these political systems and processes be familiarized with and gain knowledge about the processes of public policy making in India and their significance in administering the state. Develop the ability to assess the functioning of the government and the administration in ensuring a citizen centric welfare administration in India.
POL HC 4036 Global Politics	To enable students to understand how to 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 globalization's conceptual frameworks and their relationships to policy interventions. to demonstrate elementary knowledge of major issues and subject-matters surrounding globalization that decides the international relations- political, economic and security relations- among the nations.
POL SE 4014: Panchayats 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.
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 analyze 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.
POL HC 5016 Classical Political Philosophy	To interpret ideas underlying traditions in classical political philosophy To analyze 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
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.
POL HE 5016 Human Rights	To interpret ideas underlying traditions in classical political philosophy To analyze 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
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 types of constitutions and the forms of governments from different parts of the world.
POL HC 6016: Modern Political Philosophy	To interpret ideas underlying traditions in modern political philosophy To analyze the debates and arguments of leading political philosophers of different philosophical traditions To appraise the relevance of modern political philosophy in understanding contemporary politics
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.
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.
POL HE 6026 Understanding South Asia	To identify geo-political and historical construction of South-Asia as a region.

	<p>To analyze the politics and socio-economic issues of the South Asian Region.</p> <p>To assess the relevance of regionalism in South Asia and India's position in the region.</p>
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Department of Zoology: It acquaints the students with the study of Zoology and the zoological varieties existing in this planet. It paves the way for future studies to interested students.

COURSES (Semester I)	OUTCOMES
<p>Core course I : Non chordates I : Protistes to pseudocolomates Paper Code: ZOO-HC-1016 Practical:</p>	<p>Students will learn about importance of systematic, taxonomy ,structural organization of the animals and will appreciate diversity of non-chordates.</p> <p>They will be able to critically analyse organization, complexity and characteristic features of non -chordates along with their signification interaction with the environment.</p> <p>Direction of different system of invertebate animals are to be situated such as leech, cockroach, pila and prawn etc.</p> <p>Study of museum specimen identified and classified the specimens which are present the departmental museum by the students for a practical knowledge of them</p>
COURSES (Semester II)	OUTCOMES
<p>Core course I : Non chordates II : Caelomates Paper Code: ZOO-HC-2016 PRACTICAL</p>	<p>Understand the evolutionary history and relationship between the different classes of chordates.</p> <p>Know the different characteristics along their habits, habitats and distribution of chordates .</p> <p>Temporary slides are prepared from different organs to study the details of their students prepared by students.</p> <p>Prepared slides are studied in this part to understand the students and arrangement of different molecular region .</p>
<p>Core Course II : Cell biology : Paper Code: ZOO-HC-2026 PRACTICAL:</p>	<p>From this segment of the syllabus students aware about the size , shape, structure and function of cells and different cell organelles. This will help the students for a better understanding of cell and its cycle</p> <p>Practical application of cellular components are to be studied by the help of this part a student will able to handle the cells and times with higher knowledge.</p>
COURSES (Semester III)	OUTCOMES
<p>Core course I: Diversity of chordata: Paper Code: ZOO-HC-3016 PRACTICAL:</p>	<p>Different groups of invertebrate animals are studied in this course including Protozoa, Porifera, coelenterate, Plathyhelminthes, Aschelminthes, Annelida, Arthropoda, Mollusca and Echinodermata. General characters and classification upto order are studied. Some special features, organs, pathogenecity, life history and significance are studied here. To create knowledge regarding internal system of chordates. To make the student observe the diversity in chordates.</p>

<p>Core course II: Animal physiology: Controlling and coordinating systems Paper Code: ZOO-HC-3026 PRACTICAL:</p>	<p>Understand the functions of important physiological systems including digestion, cardio respiratory, renal, nerve and muscle, reproductive and endocrine glands. Explaining various aspects of physiological activities of animals with special reference to humans. This will provide basic understanding of the experimental methods and designs that can be used for further study and research.</p>
<p>Core course III: Fundamentals of Biochemistry: Paper Code: ZOO-HC-3036 PRACTICAL:</p>	<p>This course will provide students with a deep knowledge in biochemistry and bioenergetics. Defining and explaining the basic principles of biochemistry and bioenergetics useful for biological studies for illustrating different their structure, function and metabolism. Identification of isolated bacteria, and growth curve microorganism. The student will get practical knowledge of preparation of buffers and measurements of pH.</p>
<p>Skill course: Ornamental Fish & Fisheries: Paper Code: ZOO-SE-3014</p>	<p>This course will provide identification of fishes up to species level. Analysis of different fish catch data and statistical derivation of their results and expression.</p>
<p>COURSES (Semester IV)</p>	<p>OUTCOMES</p>
<p>Core course VIII: Comparative Anatomy of Vertebrates Paper Code: ZOO-HC-4016 PRACTICAL:</p>	<p>The course content gives idea about comparative knowledge of the basic structure of organs or organ system in different group of animals to establish the evolutionary relationship. Students will have understood the structures of different systems such as integumentary, skeletal, digestive, respiratory, circulatory, urogenital, nervous and sensory organs in comparative way among the vertebrate and adaptation.</p>
<p>Core Course IX: Animal Physiology :life sustaining systems: Paper Code: ZOO-HC-4026 PRACTICAL:</p>	<p>Students will know the physiology of digestion, respiration, circulation, excretion and adaptation. Understand the functions of important physiological systems including digestion, cardio-respiratory, renal, nerve and muscle, reproductive.</p>
<p>Core course X: Biochemistry of Metabolic Process Paper Code: ZOO-HC-4036 Practical:</p>	<p>Students will understand the metabolism of carbohydrates, lipids, and protein in details. They will also learn about oxidative phosphorylation and redox reactions. Understanding the fundamental biochemical principles such as the structure, functions of biomolecules, metabolic pathway and regulation of biological, biochemical process.</p>
<p>Skil enhancement course: Non-mulberry Sericulture: Paper Code: ZOO-SE-4014</p>	<p>This course offers employment and job opportunities in the public, private and government sector. This will give understand the knowledge about the cultivation of mulberry.</p>
<p>COURSES (Semester V)</p>	<p>OUTCOMES</p>

<p>Core course XI: Molecular Biology Paper Code: ZOO-SE-4014 PRACTICAL:</p>	<p>Students will acquire knowledge about replication, transcription, translation, post transcriptional and post translational modifications ,gene regulation ,DNA repair mechanism and various molecular tools and techniques like PCR ,southern ,northern ,western blotting ,RDT etc. Students will know the various tools and technique related to bacterial microbiology. Some aspects of applied microbiologyand diseases related to microbiology will also be learnt by thestudents.</p>
<p>Core course XII:Principles of Genetics Paper Code: ZOO-HC-5016 Practical:</p>	<p>Students will learn the fundamental genetics like Menlian and non-mendalian inheritances, linkages , mutations , sex determination of various animals ,extrachromosomal inheritances, transposable genetic elements etc. °Student will understand the various aspects of biostatistics-l such as central tendency, t-test, chi-square, ANOVA, correlation and regression.</p>
<p>Decipline Centric Elective Courses: 1.Animal Biotechnology : Paper Code: ZOO-HE-5026 Practical:</p>	<p>Imparts the to culture animal cells in artificial media and knowledge of animal cells in culture, growth of cell lines. It gives insight into various cell/tissues culture techniques. Understanding of in vitro culturing of organism andproduction of transgenic animals.</p>
<p>Courses: 2.Endocrinology Paper Code: ZOO-HE-5036 Practical:</p>	<p>Understand nerohormes and neurasectrions and learn about hypothalamo and hypapophysical axis. Understand the different endocrine glands and their disorders. Understand about the dissection and demonstration of endocrine glands in laboratory and study of the permanant slides of all the the endocrine glands.</p>
<p>COURSES (Semester V)</p>	<p>OUTCOMES</p>
<p>Core Course XIII: Developmental Biology Paper Code: ZOO-HC-6016 Practical:</p>	<p>Students will learn the different aspects of early ,late and post embryonic developments .They will have the knowlege about implications of development biology in various fields , such asin tetratogenesis ,stem cell biology, in-vitro fertilization, cryopreservation ,cord blood transfusion etc. Students will be able to analyse scientific data and draw conclution from identify mechanisms involved in the development of complex organism from the egg in fertilized sperm.</p>
<p>Core course XIV :Evolutionary Biology : Paper Code: ZOO-HC-6026 Practical:</p>	<p>Students will know about population genetics ,human evolution ,various concepts about origin of species, extinctions, phylogenetic tree making. They will also understand few basicof bioinformatics. Understand how DNA encodes genetic information and the function of tRNA and apply the principles of Medelian</p>

	Inheritance
Discipline Centric Elective Course1. Biology of Insecta Paper Code: ZOO-HE-6016 Practical:	Attain a solid foundation in insect biology, including general entomology, basic systematics, morphology, physiology and biodiversity. Develop the ability to design and perform a scientific study on insects and to analyse results.
Course 2. Fish and Fisheries : Paper Code: ZOO-HE-6026 PRACTICAL: Dissertation : Dissertation of Zoology specific subject:	Students will learn the need to incorporate social information in fisheries. Students graduating with a Bachelor degree in Aquaculture will be trained to involve in higher education and other job opportunities. Demonstrate knowledge of the biological, economic, social and managing fisheries. The outcome of this course is the completion of a dissertation. The Dissertation reports a research project conducted with the guidance of an academic supervisor

Zoology (Regular & Honours Generic)

COURSES (Semester I)	OUTCOMES
Core course1: Animal diversity Paper Code: ZOO-RC-1016 (ZOO-HG-1016) PRACTICAL:	To classify phylum porifera with taxonomic keys To describe the phylum coelenterates and its polymorphism To identify the given mollusca with respect to economic importance To explain classification of protozoa and diseases caused by them To explain classification of protozoa and diseases caused by them. Students will be able to evaluate animals according to the level of organization. Body plan, symmetry, germ layers, coelom development etc.
COURSES (Semester II)	OUTCOMES
Core course2: Comparative Anatomy and Development Biology of vertebrates Paper Code: ZOO-RC-2016 (ZOO-HG-2016) PRACTICAL:	To study about the basic structure, organisms. To know about the anatomical systems and their modification in the major transitions in vertebrates evolution. Students will be able to study the general patterns and sequential developmental stages during.

COMMON FOR ALL STREAMS (ARTS & SCIENCE)

ENVIRONMENTAL STUDIES

Courses (SEMESTER I)	Course outcomes
Ability Enhancement Compulsory Course (All Undergraduate Degree Programmes under Gauhati University) ENV -AE -2014: Environmental Studies	Students are introduction to Environmental Studies types of Ecosystems, Natural Resources and their Types, Renewable and Non-renewable Resources Biodiversity and Conservation, Environmental Pollution Environmental Policies & Practices Human Communities and the Environment. It also includes Field work. By and large it makes the students conscious about the natural environment that they live in and the need to have a holistic approach towards the environment.

BODOLAND UNIVERSITY

Program Outcomes, Program Specific Outcomes and Course Outcomes

Udalguri College, Udalguri

The following subjects are taught at Udalguri College, Udalguri with affiliation to Bodoland University, Kokrajhar, Assam. The undergraduate programme in both Science and Arts stream, cover a period of three years of fulltime study consisting of six semesters. The College offers 8 honors' and 9 regular courses in Arts stream. The subjects are Assamese, Bodo, Economics, Education, English, History, Nepali, Philosophy and Political Science. It also offers 6 honors' and 6 regular courses from Science stream and the subjects are Botany, Chemistry, Mathematics, Physics and Zoology. Besides this, Environmental Studies is a compulsory subject in 2nd Semester for students of both Arts & Science Stream. The courses have been designed by the affiliating university for increasing the knowledge base, inculcating a spirit of inquiry and for taking a holistic approach towards their environment.

1. Bachelor programme in Assamese	
Programme Outcome	After completion of this programme students will gain information on the Assamese culture and tradition. They will be equipped with the every aspects of the language
Programme Specific Outcome	This programme provides skills in creative writing. Competence in the language will empower them with communicative skills. After passing out students can opt for Post Graduate in literature, Linguistics, Culture Studies, Mass Communication and Tourism. They can engage themselves as teachers and also as entrepreneurs in agriculture.
Course Outcome	Completion of the course in Assamese at undergraduate level develop students with the knowledge of linguistics and the history of Assamese literature including Western and Eastern Literature and Cultural History. The cultural history paper includes various aspects relating to the cultural diversity of the ethnic people. This paper requires the students to acquire knowledge on indigenous dress and ornaments. It also encompasses information on various religious and historical places of interest and archaeology.

2. Bachelor programme in Bodo	
Programme Outcome	Completion of Undergraduate programme in Bodo equips the students with obtaining more information about the culture and tradition of the Bodos. It will make the students well educated in the language.
Programme Specific Outcome	Helping the students who did not learn Bodo know the basics of the

	language. Teaching various genres in Bodo literature to the students helps to acquire competency and empower them with communicative skills and encouraging creative writing in the literature of the Bodos. After completion the students can forward to postgraduate level as well as for different jobs.
Course Outcome	This course will develop self-confidence. Aiming at enriching human excellence; increasing the level of comprehension and exercising communal harmony. Different prose, poetry, drama, criticism of the writers and their creations are the main topics covered in the syllabus. Comparative literatures with other ethnic languages are also the subject matter of this course.

3. Bachelor programme in Botany	
Programme Outcome	Bachelor programme in Botany deals with the deeper understanding of the scientific issues for day to day application. It prepares the students to understand the impact of development on environment safety and its significance for sustainable ways of development. How the plants are essential to life sustenance and its anatomy, physiology, morphology are the main topics of this programme.
Programme Specific Outcome	Mainly reveals the importance of plants, their diversity and conservation. Achieve knowledge of pure and applied botany. Understand contribution of botany in increase and improve our supply of medicines, food, fibers and other plant products. Understand health and environmental protection and to solve the pollution problems. Understand knowledge of botany is an essential pre-requisite for the pursuit of many applied sciences like Agriculture, Horticulture, Sericulture, Forestry, Pharmacology and Medicine.
Course Outcome	The students learn about general characteristics, morphology, reproduction and economic uses of Algae and Lichen, Fungi and plant diseases, Bryophytes, Pteridophytes and Gymnosperms, Fossil plants; taxonomy, morphology, embryology, and anatomy of the Angiosperms. The students become proficient in knowing Phyto- geography and Economic Botany. The students absorb conceptual knowledge in understanding about Biochemistry and plant Metabolism, Ecology and Pharmacology, Microbiology, Plant Physiology, Cell Biology, Genetics, Molecular Biology, Plant Biotechnology and Tissue Culture. The students acquire skill about Biofertilizers, Ethnobotany, Mushroom Culture, Floriculture techniques and its applications and Nursery and Gardening.

4. Bachelor programme in Chemistry	
Programme Outcome	B.Sc. Chemistry curriculum is so designed to provide the students a comprehensive understanding about the different branches of Chemistry such as Organic Chemistry, Inorganic Chemistry, Physical Chemistry and Analytical Chemistry. The practical exercises done in the laboratories impart the students

	the knowledge about various chemical reagents and reactions. Thereby, hone their skills of handling the corrosive, poisonous, explosive and carcinogenic chemicals making themselves employable in any kind of chemical industries. They are also trained about the adverse effects of the hazardous chemicals and the first aid treatment.
Programme Specific Outcome	The students will learn the diversified structure of the matter which remains in the form of molecules, atoms and sub atomic particles. They will learn to estimate both inorganic and organic compounds and their analysis both qualitatively and quantitatively. Students will learn to produce and synthesize some chemical compounds by the knowledge of different reactions.
Course Outcome	Students will have a firm foundation in the fundamentals and application of current chemical and scientific theories including those in Analytical, Inorganic, Organic and Physical chemistry. In General and Analytical Chemistry, the periodicity in properties of elements, laboratory titrations, chromatography and other separation techniques are studied. Students can also learn some industrial aspects of Inorganic and Organic Chemistry, various bio and synthetic fuels, industrially important organic chemicals, basic metallurgical operations and an elementary idea regarding nano-chemistry. The course also contains the understanding of various atom models, different types of bonds and to have exposure to various emerging new areas of organic chemistry. Students will also understand the chemistry of Natural products and Bio-molecules.

5 Bachelor programme in Economics	
Programme Outcome	Students will understand the economic variables including inflation, unemployment, poverty, gross domestic product, etc, to understand the behaviour of financial and money markets and to develop knowledge about prospects of growth. The course will provide knowledge on analyzing economic policies including fiscal and monetary policies in India.
Programme Specific Outcome	This programme prepares students for career as professionals or researchers in the field of Economics. Students are equipped with knowledge to take up higher education, for Competitive Examinations in the Banking and Administrative sectors, to take up entrepreneurship, compete in Indian Economic Service, go for Master of Business Administration etc.
Course Outcome	The course deals with the students to understand the theories of exchange among rational economic agent in variant market structure. It helps students to get an idea of the behaviour of Indian and World economy. Three year Under Graduate course in Economics (Major) covers Mathematical Economics, International Economics, Indian Economics, Economic Application, History of Economic Thought, Public Finance and Monetary System.

6. Bachelor programme in Education	
Programme Outcome	Basically the programme helps the students to understand the different dimensions of Education. The course explains the Indian and Western schools of Philosophy and their impact on Education. The course also involves understanding the meaning and different perspectives of psychology and different theories of intelligence. The recommendations of the different Education Commissions are included in the course. It also discusses the contribution of great educators.
Programme Specific Outcome	The course prepares students for higher studies in Education and Psychology. It equips students for various avenues like research, teaching, competitive examinations, jobs in DIET, etc.
Course Outcome	Micro-teaching, preparing lesson plans, practice teaching in schools are integral parts of the syllabus and these are some important essence of teaching skills which will train the students in their future endeavour. Students will also gain a reasonable knowledge in psychology.

7. Bachelor programme in English	
Programme Outcome	The Under Graduate programme in English deals mostly with English literature and its history. It makes the students familiar with different literary genres – fiction, non-fiction, poetry, plays, biography, autobiography, journal, film, plays, etc. Develops intellectual, personal and professional abilities through effective communicative skills.
Programme Specific Outcome	Knowledge in grammar and usage and linguistic structure of the English language will develop the communicative skills of the students. The course familiarizes students with the main events, conflicts and inventions of Great Britain, to comprehend literary texts written by great writers of English from the ancient to the modern times.
Course Outcome	The course will enable students to acquire sound comprehension of social, cultural, biographical, historical background of British and other European literature, American literature, Indian Writing in English. As the course is basically multi-disciplinary the students have a lot of career-options – teaching, News Media, Communication Media, Tourism Industry, as Air Hostess etc. They can opt for further studies in English, Linguistics, Culture Studies, Folklore, MBA, Mass Communication, Tourism, Law etc.

8. Bachelor programme in History	
Programme Outcome	The programme basically deals with past events written in a chronological account and relating to the present. Sound Knowledge of different Historical Periods in each semester is studied with a definite emphasis on modern research and trends.
Programme Specific Outcome	An Interdisciplinary Perspective of the current syllabus provides a student new insights into areas of literature, political ideas, economic planning and cultural form. Inclusion of courses dealing with the development of Archaeology and museums can enhance the vision of the students and develop skills. This course prepares students for higher studies in History, Archaeology, Culture Studies, and Mass Communication etc and for any competitive examination including Civil Services.

Course Outcome	The Under Graduate course in History comprises of Ancient, Medieval and Modern Indian history, The course also includes History of Great Britain, European History (different periods) and International Relations. To give the students an insight into the regional history the course includes the history of Assam of different periods.
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9. Bachelor programme in Mathematics	
Programme Outcome	Completion of the bachelor programme in Mathematics prepares the students to understand and view mathematical structures. They will learn numerical aptitude applying both qualitative and quantitative knowledge for their future career. The elective paper fuzzy set theory imparts thorough knowledge in fuzzy mathematics which is very useful for the students to do their research programs in future. The UG curriculum offers need based computer courses which enable the students to solve computer oriented numerical problems.
Programme Specific Outcome	After successful completion of the programme, students can opt for an advanced course such as Pure Mathematics, Applied Mathematics, Computer applications etc., under Gauhati University as well as other Indian Universities. Job market for a graduate in Mathematics is also very bright. The mathematics UG students after the completion of the course will gain a thorough knowledge in preparing competitive examinations conducted by different banking sectors, APSC and UPSC. Abstract courses and mathematical structures includes in the UG program enable the students to prepare themselves for higher education leading to M.Sc./MCA degree courses.
Course Outcome	The Bachelor programme in Mathematics are well planned to cover a wide spectrum of topics in Mathematics as Classical, Abstract and Linear algebra and their applications; Analytical geometry of dimension 2 and 3 and vector analysis ; Differential and integral calculus; Real analysis and Complex analysis ; Basic courses of topology and Functional analysis ; Ordinary and partial differential equations and the theory of integral transforms ; Statics and hydrostatics ; Operations research and game theory ; Computer programming, Numerical analysis and computer aided numerical practical and Probability and statistics
10. Bachelor programme in Nepali (as Gen Course)	
Programme Outcome	Students become familiar about linguistics, poetry & drama, Nepali novels, essays , grammar, the art of composition, editing & proof reading, news collection & reporting, comparative study of Nepali & Assamese Literature, Eco Tourism & Management, Theoretical perspectives of language & linguistics, computer literacy & skill enhancement.
Programme Specific Outcome	The programme makes the students familiar with the different aspects associated with Nepali linguistics & literature and contemporary trends in literary studies develops introspective thinking and analytical abilities of the students.
Course Outcome	Students get the preparatory ground for further studies in the concerned subject.
10. Bachelor programme in Philosophy	
Programme Outcome	The bachelor programme in Philosophy deals with the study of Greek Philosophy, Indian and Western Philosophy and Ethics, Philosophy of Religion- theory, origin and development, Epistemology and Metaphysics, Social and Political Philosophy and Logic.

Programme Specific Outcome	The programme develops introspective thinking and analytical abilities of the students. At the end of the course students opt for higher studies in Philosophy. Students are expected to be acquainted with Classical, Medieval and Modern Philosophers and their writings. The programme consists of Classical, Medieval and Modern Philosophies both Indian and Western.
Course Outcome	Since topics on Ethics, Psychology, Logic, 20th century philosophy and many more present day relevant philosophical thoughts are all included in the syllabus, the students are expected to acquire deep understanding of present, relevant philosophical thoughts which again would help them in research work. Along with it the syllabus also had papers on Logic and Reasoning.
11. Bachelor programme in Physics	
Programme Outcome	After completion of the programme in Physics, Students are intended to develop a conceptual understanding of physics principles. They will be able to demonstrate concepts in Newtonian Mechanics, Electromagnetism, Thermodynamics and Quantum mechanics. They will be able to translate a physical description to a mathematical equation and conversely explain the physical meaning of the mathematics, represent key aspects of physics through graphs and diagrams and use geometric arguments in problem-solving.
Programme Specific Outcome	On the completion of bachelor programme in Physics, students learn the basic mathematical tools, needed to understand different branches of Physics. They are trained to apply these techniques through numerical exercises. They are familiarized with hands-on training in the furnished and equipped laboratory for practical verification of the physical theories that they learn during class lectures. It makes the students eligible for the further post-graduate studies, in physics, electronics, instrumentation, computer applications etc. They will discover of physics concepts in other disciplines such as mathematics, computer science, chemistry etc. Three years undergraduate programme in Physics also prepares the students for career as teachers or researchers in different branches in pure and applied physics.
Course Outcome	The course in physics includes different properties of natural objects, like mechanical, thermal, electrical, magnetic properties etc. In accordance with the recent development in information technology, the students get familiarized with the computation facility with motivations for physics applications. They learn the basic mathematical tools like vector analysis, differential equations, matrix and determinant, Complex analysis etc. The mechanical and general properties of matters are also discussed. Several particles in nature move with a velocity comparable to velocity of light. Students learn the Einstein's modification on the concept of space-time, through special theory of relativity. The Physics of immobile charges and charges in motion are also studied in this course. The students learn different types of waves and oscillations, viz., acoustical as well as electromagnetic. Kinetic Theory, Thermodynamics and Statistical mechanics are three approaches of thermal physics. Students learn their details and difference in approach. They are familiarized on the different statistics.
12. Bachelor programme in Political Science	
Programme Outcome	Completion of the bachelor programme in Political Science leads a significant thrust on the knowledge of Indian Constitution, Indian Politics and Government, Public Administration and International Relations. It also requires students to study the constitutions of China, Switzerland, United Kingdom and America. The course includes Sociology, Women and Politics, Western and Indian Political Thinkers and Human Rights.

Programme Specific Outcome	The programme familiarizes the students with different approaches to the study of politics and orients them on contemporary political problems and behaviour thus enabling them to formulate a general idea on political phenomena. It also helps them to comprehend the basic structure and processes of government systems.
	programme prepares students for pursuing higher education in Political Science. It orients students towards national and state level competitive examinations like APSC, UPSC, etc. Many students also pursue courses in Law.
Course Outcome	The Course outlines of the discipline of Political Science are divergent and contemporary. The course completion results the study of the different concept of political theory and comparative politics. It also study the concept of different political systems, Indian Government and politics, knowledge about Indian constitution, theories of International relations, concept of interrelations among the states and its impact, legislative practices and procedures, human rights, social movements in contemporary India, basic theories of public administration and local governance.
13. Bachelor programme in Zoology	
Programme Outcome	After completion of the bachelor programme in Zoology students will gain knowledge and develop skill over animal sciences, understands the interactions among various living organisms, internal structure and functions of various body parts. Understands the complex evolutionary processes and behavioural pattern of various animals. Students are able to correlate the physiological and biochemical processes of animals.
Programme Specific Outcome	As a result of the completion the students will understand ecological factors, environmental conservation processes and its importance, pollution control and biodiversity and protection of threatened species. They will gain knowledge about applied fields like sericulture, fisheries, apiculture, poultry and dairy farms along with tissue preparation, molecular and statistical techniques. They will understand about various concepts of genetics and its importance in human health. They will be able to apply such knowledge in the practical field which will give them different job opportunity. Contributes the knowledge for Nation building.
Course Outcome	After completion of the course, student will understand the nature and basic concepts of cell biology, genetics, taxonomy, physiology, ecology and applied Zoology. They will be able to analyse the relationships among animals with their ecosystems. They can perform procedures as per laboratory standards in the areas of Taxonomy, Physiology, Ecology, Cell biology, Genetics, Applied Zoology, Clinical science, tools and techniques of Zoology, Toxicology, Sericulture, Biochemistry, Fish biology, Animal biotechnology, Immunology and research methodology as a result of the course completion. Develops concepts regarding various theories and experiments about organic evolution. Imparts knowledge to the student regarding various laws of ecology, types of ecosystem, population and community characteristics and dynamics. Students gain fundamental knowledge of environmental pollutions due to toxic materials and their effects over ecosystem and learns about sustainable development, animal behavior and sociobiology, applied zoology, conservation biology & wildlife, bio-informatics, understands concepts of fisheries, sericulture, apiculture, poultry, dairy along with tissue and cell culture techniques.
14. EVS: AEC: AECC2: Environmental Studies	
Programme Outcome	It prepares the students to become responsible citizens and to have a responsible approach to environment.
Programme Specific Outcome	It prepares the students with the basic knowledge about environment and to have holistic approach towards it.
Course Outcome	Students get to know about environment, ecosystem & its conservation.

