



**PROGRAMME OUTCOME
&
COURSE OUTCOME**



**UDALGURI COLLEGE, UDALGURI
FOUR YEARS UNDERGRADUATE PROGRAMME (FYUGP)
BASED ON
NEP 2020
UNDER BODOLAND UNIVERSITY**



Office of the Principal
Udalguri College

Udalguri, BTR, Assam: 784509

Memo No:

Date:

FOUR YEARS UNDERGRADUATE PROGRAMME (FYUGP) BASED ON NEP 2020 UNDER BODOLAND UNIVERSITY

The College follows the Programme Outcome (PO) & Course Outcome (CO) of Bodoland University to which it is affiliated. In addition, the college delineates the following points as programme outcomes:

UG Arts

1. To realize the potential of learners in facing future challenges in the professional world and prepare them for building a developed nation.
2. To develop subject-specific knowledge as a foundation for higher studies in the concerned field.
3. To ensure that the learners graduate as restrained social beings with certain values infused in them.
4. Garnering the ability to contribute to society; Socially, culturally, academically and economically.

UG Science

1. To realize the potential of learners in facing future challenges in the professional world and prepare them for building a developed nation.
2. To develop subject-specific knowledge as a foundation for higher studies in the concerned field.
3. To ensure that the learners graduate as restrained social beings with certain values infused in them.
4. To motivate the learners to develop an innovative zeal for contributing to development.
5. To infuse the learners with a more scientific temperament to guide society in eliminating superstitious perceptions.

Further, the course outcomes as specified by Bodoland University are given below:

**DEPARTMENT-WISE COURSE & PROGRAMME OUTCOME,
 UDALGURI COLLEGE, UDALGURI**

SI No.	Departments	Page No.	SI No.	Department	Page No.
1.	Assamese	01-02	8.	Philosophy	20-22
2.	Bodo	03-06	9.	Political Science	23-25
3.	Economics	07-08	10.	Botany	26-32
4.	Education	09-11	11.	Chemistry	32-34
5.	English	11-14	12.	Mathematics	34-37
6.	History	14-16	13.	Physics	37-41
7.	Nepali	16-20	14.	Zoology	41-46

Abbreviations Used: MAJ – Major MIN – Minor IDC – Inter Disciplinary Course AEC – Ability Enhancement Course SEC – Skill Enhancement Course VAC – Value Added Course INT – Internship REM – Research Methodology DIS – Dissertation ADL – Advanced Learning.

Department of Assamese

Programme Outcome:

The present prescribed course has incorporated a wider range of areas like Linguistic Studies, Culture Studies, Translation Studies, Critical Theories, Comparative Literary Studies, Gender Studies and Research Methodology etc to cater to the demands of contemporary times. Thus, the course aims at keeping the learners up to date with imparting adequate knowledge of the concerned and its related fields. Special emphasis has also been put on the study of traditional literary and cultural texts, ethnic literary texts, and cultural practices so that students can be acquainted with the values and ethos being exemplified by such texts, which in turn will make them aware of the documentation and preservation of traditional knowledge system to make them sustainable for the time to come. Texts are selected taking given seminal areas like environmental crisis, gender issues, cultural and linguistic sustainability so that a comprehensive critical perspective of the learners can be developed. Projects and dissertations are also incorporated to enhance the research aptitude of the learners. Courses relating to ICT tools have also been introduced to make the learners acquainted with the advanced technologies of learning. Courses, professional by a large extent, like Creative Writing, Editing, and Translation Studies have also been incorporated taking advantage of the aspect of future employability if the students.

Course outcome:

SL No	Course Code	Title of the Course	Course Outcomes
1.	ASMMAJ1014	History of Assamese Literature-I	a) To understand the historical context of Assamese Literature b) To understand the contextual factors that make distinct influence in the production and circulation of literature c) To impart knowledge about the major trends and writers of Assamese Literature.
2.	ASMMAJ2014	Evolution of Assamese Language	a) To acquaint the learners with the origin and development of Assamese Language b) To impart insight regarding various stages and forms of Assamese language through the Proto, Early and middle ages.
3.	ASMMAJ3014	Culture of Assam	a) To introduce the students with the cultural life of the major ethnic groups of Assam. b) Students will understand how Assamese Culture is formed with the process of assimilation which in turn foster mutual understanding and sense of brotherhood. c) To make the students aware in achieving cultural sustainability by fostering understanding and respect to their cultural traits.
4.	ASMMAJ3024	General Linguistics	a) Students will understand various aspects of language and how these aspects are addressed in Linguistics b) To impart general knowledge about the structural features of language. c) To acquaint the students with the origin and development of linguistics along with the major trends and types of linguistics. d) To introduce the learners with the functional aspects of language.
5.	ASMMAJ4014	Assamese Poetry I	a) To introduce the students with the various trends and stages of development of Assamese poetry. b) To impart knowledge to the students about the nature of Assamese folk poetry with reference to some selected specimen. c) To introduce the early Assamese poetry through the study of some of the works of Major Assamese poets.
6.	ASMMAJ4024	Introduction to Assamese Drama I	a) To throw light on the domain of Assamese Drama from its commencement to the Post Sankari period
7.	ASMMAJ4034	Introduction to Assamese Prose	a) To understand the basic characteristics and nature of prose and criticism in general. b) To acquaint the learners about the origin and stages of development of Assamese prose and criticism.
8.	ASMMIN1014	History and Trends of	a) Students will get an opportunity to understand the development of Assamese literature.

		Assamese Literature	b) The learners will internalize the major trends in Assamese Literature by reading selected works of major Assamese writers.
9.	ASMMIN2014	Cultural Behaviour of Assam	a) To make the students understand the inherent significance of the prevalent cultural traits. b) Learners will also come to know the major ethnic groups of Assam along with their contribution to making Assamese Culture. c) It is expected that after learning the course a sense of longingness would be nurtured in the mind of the students that in turn imbibes spirit of cultural preservation and conservation.
10.	ASMMIN3401	Functional Grammar of Assamese	a) The basics of Assamese grammar will be imparted. b) The course aims at making the students capable of applying Assamese language in a correct manner.
11.	ASMMIN4014	Assamese Prose and Biography	a) To make the learners know the origin and development of Assamese prose in terms of selected major prose works. b) Students will also get an opportunity to understand the trends and development of Assamese biographical writings. c) Reading some of the major biographical writings will also have a moral impact on the minds of the learners.
12.	ASMIDC1013	Writing Materials of Assam	a) History and development of writing materials in Assam. b) To attain knowledge about different writing forms and materials of Assam.
13.	ASMIDC2012	Literature and Nature	a) Students will internalize the significance and prospect of the representation and exemplification of nature in Literature in general and in Assamese literature in particular. b) To imbibe the spirit of environmental awareness and preservation in the mind of the young learners.
14.	ASMIDC3013	Women and Literature	a) Internalizing the significance of women issues in literature. b) To understand the politics of representation of women in literature. c) To understand different aspects of woman representation in Assamese literature in terms of select texts.
15.	ASMSEC1013	DANCE FORMS OF ASSAM	a) To give an overview of different forms of dance forms prevalent in Assam b) To understand the cultural and philosophical significance of the dance forms of Assam.
16.	ASMSEC2013	APPLIED ASSAMESE	a) To enable the students to internalize the proper usage of Assamese language in written and spoken forms. b) The basics of Assamese grammar will be imparted. c) The course aims at making the students capable of applying Assamese language in a corrected manner.
17.	ASMSEC3013	ARTIFACTS OF ASSAM	a) To introduce the students with the different forms of artifacts of Assam. b) The technical issues will also be emphasized to imbibe a pragmatic understanding of the forms of artifacts. c) It in turn helps create interest in the minds of the learners to practice such artifacts that can pave opportunities of employability.
18.	ASMAEC1012	Study on Folk Treatment of Assam	a) To introduce the students to the folk medicines and their significance in the modern period. b) To inspire the students to value the traditional knowledge system.
19.	ASMAEC2012	STYLE OF ASSAMESE LANGUAGE	a) To impart different aspects of style in the usages of the Assamese language. b) To introduce the styles in Assamese language ranging from literature to non-literary texts.
20.	ASMAEC3012	Cultural Tourism of Assam	a) To understand the significance and scope of culture and folklore as a means of tourism. b) To imbibe the spirit of cultural sustainability by highlighting the significance of culture from the perspective of economy and livelihood
21.	ASMAEC4012	Creative writing	a) To internalize the process of making of literature. b) To introduce the students with the craftsmanship of literature.

Department of Bodo

The NEP-UG program in Bodo Major (Core) is designed to achieve specific knowledge in the light of a comprehensive approach relevant to the present context. The whole program is structured in such a way that students will be able to achieve comprehensive knowledge in literature, culture, and linguistic studies. The basic outcomes of the program-

- **Thorough or In-depth knowledge:** The program is to make understand the concepts and processes related to an academic field of study and to demonstrate the applicability of their domain knowledge and its links to related disciplinary areas/subjects of study as their choices.
- **Specialised knowledge and skills:** It is to demonstrate procedural knowledge and skills in areas related to one's specialization and current developments, including a critical understanding of the latest development in the area of specialization, and an ability to use established techniques of analysis and inquiry within the area of specialization.
- **Interdisciplinary Perspective:** The program is to make a commitment to intellectual openness and developing understanding beyond subject domains.
- **Analytical and Critical Thinking:** It is also demonstrates independent learning, analytical and critical thinking of a wide range of ideas and complex problems and issues.
- **Communication Competence:** Demonstrate effective oral and written communicative skills to convey disciplinary knowledge and to communicate the results of studies undertaken in an academic field accurately in a range of different contexts using the main concepts, constructs, and techniques of the subject(s) of study.
- **Career Development:** Manifest proficiency in academic, professional, soft skills, and employability required for higher education and placements.
- **Research and Innovation:** Demonstrate comprehensive knowledge about current research in the subject of specialization; critical observation to identify research problems and collect relevant data from a wide range of sources, analysis, and interpretation of data using methodologies as appropriate to the area of specialization for formulating evidence-based research output.
- **Team Work:** Work in teams with enhanced interpersonal skills and leadership qualities.

Course outcome:

SL No	Course Code	Title of the Course	Course Outcomes
1.	BODMAJ1014	History of Bodo Literature	After completing this course students will be able to- <ul style="list-style-type: none">• Understand the background of literary history of the Bodo literature.• Realize life and society of the community.• Demonstrate critical and analytical approach in literature review
2.	BODMIN1014	Introduction to Language and Linguistics	After completing this course students will be able to- <ul style="list-style-type: none">• Gather general idea about language and linguistics.• Acquire considerable knowledge of linguistic level of human speech of how languages are well-ordered in case of phonological, morphological, syntactic and semantic process;• Understanding of how the structures vary language to language, of how language changes through the ages;

			<ul style="list-style-type: none"> • Understand functions of language, human knowledge that generates through linguistic discourse.
3.	BODIDC1013	Textual analysis on Early Bodo Drama	<p>At the end of the course the students shall understand –</p> <ul style="list-style-type: none"> • About the background of Bodo drama and will be able to know social context of the era. • About old period of Bodo drama. • The aestheticism of Bodo drama and its historical trends. • Dramatic art and literary value. • Life and literary importance of literary works.
4.	BODAEC1012	Functional Bodo	<p>At the end of the course the students shall –</p> <ul style="list-style-type: none"> • Able to develop linguistic competence. • Able to identify the language functions in the spoken discourse. • Able to demonstrate ability of expression by improving grammatical skill. • Able to discuss topic in a group
5.	BODSEC1013	Introduction to Translation Studies and Practice	<p>After successful completion of the course student will be able to-</p> <ul style="list-style-type: none"> • Understand the concept of translation and types of translation and its applicability in literature. • Know the need and importance of translation. • Understand the sociological significance of language, literature and culture.
6.	BODVAC1014	Selected Text on River and Water in Bodo Literature	<p>At the end of the course the students shall understand – 19</p> <ul style="list-style-type: none"> • About the rivers and water focussed in literature and will able to know importance in social life. • About the role of rivers and water in agriculture and nature to be alive. • The aesthetic figures used in different genres of literature. • The importance of rivers and water in literary works as well as practical life.
7.	BODMAJ1024	Study of Early Bodo Poetry	<p>At the end of the course the students shall understand –</p> <ul style="list-style-type: none"> • About the trend of old Bodo poetry. • About mystic and romantic poems composed during the period. • About the poems composed to bring social awareness among the mass
8.	BODMIN1024	Traditional Knowledge System of the Bodos	<p>After successful completion of the course student will be able to-</p> <ul style="list-style-type: none"> • Understand the concept of traditional knowledge and its applicability in life and social space. • Know the need and importance of safeguard of traditional knowledge system. • Understand the sociological significance in life and society. • Understand the importance of intellectual property in different sectors.
9.	BODIDC1023	Introduction to Culture	<p>At the end of the course the students shall understand –</p> <ul style="list-style-type: none"> • About the general concept of culture and its characteristics. • The relation between folklore and society. • About diffusion, acculturation and assimilation of culture.
10.	BODAEC1022 (MIL-1)	Speaking and Writing Ability in Bodo	<p>After completing this course students will be able to-</p> <ul style="list-style-type: none"> • Know to acquire pragmatic knowledge of language use. • Understand human knowledge associated with human intelligible language. • Demonstrate ability of expression of thought in different contexts
11.	BODSEC1023	Application of Bodo in Computer	<p>After completing this course students will be able to-</p> <ul style="list-style-type: none"> • Acquire pragmatic knowledge of computer language. • Understand application of computer how to use and control to create file and folder. • Demonstrate ability of software, Internet and Website to handle the present-day
12.	BODVAC1024	Handloom and Weaving of the Bodo	<p>At the end of the course the students shall –</p> <ul style="list-style-type: none"> • Develop the ability to apply knowledge on fibre, yarn, handloom weaving, advanced fabric manufacture, fabric structure, chemical processing and testing of textiles in the field of handloom and textile manufacture. Able to make competence in news and report writing. • Provide ability to apply the knowledge on theory of yarn structure, fabric structure and design concepts on product development.

			<ul style="list-style-type: none"> • Ability to identify and solve technological problems in handloom and textile industry. • Ability to analyse and apply knowledge in the field of design and production of handloom textile and other textile products using computational platforms and software tools. • Commitment to implement the professional and ethical values. • Use the techniques, skills, and modern tools necessary for practicing in the handloom and textile industry. • Ability to communicate effectively and work in interdisciplinary groups. • Ability to review, comprehend and report technological development.
13.	BODMAJ2014	Folk-Festivals of North East India	<p>Able to understand community history and traditions.</p> <ul style="list-style-type: none"> • Able to realize social philosophy and helps to preserve our culture and heritage. • Understand more about Ethical and moral values. • Know more about social responsibility as a member of society. • Give unique opportunity to exchange cultural views which promotes social harmony
14.	BODMAJ2024	Study of Modern Bodo Poetry	<p>At the end of the course the students shall –</p> <ul style="list-style-type: none"> • Able to define the elements of poetry and aesthetic attribute. • Understand the poetry as a means of transference of human emotions, feeling and human psychology. • Able to demonstrate skill for using emotional language in the form of poetic expression. • Able to develop self-expression and structural creativity based on life and social space.
15.	BODMIN2014	Phonology of Bodo Language	<p>At the end of the course the students shall –</p> <ul style="list-style-type: none"> • Able to understand basics of phonology of the language. • Able to realize linguistic application in discourse context. • Able to develop linguistic skill. • Able to acquire competence for effective communication in diverse context of speaking
16.	BODIDC2013	Language and Script of Bodo	<p>At the end of the course the students shall –</p> <ul style="list-style-type: none"> • Understand basics of language and linguistic features. • Able to realize linguistic application in discourse context. • Able to develop linguistic skill and script grammar. • Able to acquire competence for effective language, linguistic and script in diverse context of speaking and writing.
17.	BODAEC2012	Communicative Bodo	<p>At the end of the course the students shall –</p> <ul style="list-style-type: none"> • Able to understand basic knowledge of vocabulary and construction of sentence of the language. • Able to use different symbols in language writing. • Able to develop linguistic and communication skill with correct pronunciation and writing. • Able to acquire competence for effective communication with clarity of voice and its pause.
18.	BODSEC2013	Manuscript Preparation	<p>At the end of the course the students shall –</p> <ul style="list-style-type: none"> • Able to understand basics of manuscript preparation in the language. • Able to know about the use of punctuations and symbols. • Able to know about benefits of editing and taking into MS word & PageMaker. • Able to develop skill how sign and symbol are used in proofreading.
19.	BODMAJ2034	Literary Criticism (Eastern)	<p>After completing this course students will be able to-</p> <ul style="list-style-type: none"> • Acquire Come to know about theory and concept of eastern literary criticism. • Understand about the uses of Rasa, Chanda and Alankara with special reference to Bodo literature. • Know the Chanda used in poetry of Bodo literature in early as well as modern literature.

20.	BODMAJ2044	Study on Folk-literature of the Bodos	<p>After completing this course students will be able to-</p> <ul style="list-style-type: none"> • Facilitate students to realize distinctive features of folk literature. • Understand cultural identity of the community. • Understand the social functions of the folklore in the social sphere. • Facilitate students to understand traditional knowledge acquired and transmitted generation to generation. • Understand about relation of man with ecology that will make student environment conscious and this is very important in present times. • Facilitate to create greater insight to life and way of living. • Understand ethical and moral values of life.
21.	BODMAJ2054	Study of Modern Bodo Drama	<p>At the end of the course the students shall understand –</p> <ul style="list-style-type: none"> • About the background of modern Bodo drama and different types of drama in Bodo literature. • About the social pictures displayed in modern drama of the era. • About modern period of Bodo drama. • About the aestheticism of modern Bodo drama and its historical trends. • About the dramatic art and literary value. • About the reality of life and literary importance of few selected dramas in Bodo.
21.	BODMIN2024	Sociological Outlook of Bodo Novel	<p>Able to understand reading and re-reading of literary texts with regards to Bodo novel in the cultural and historical context.</p> <ul style="list-style-type: none"> • Realized relation of life and literature. • Able to understand fundamental significance of narrative in human life and culture. • Able to realize sociological issues raised by the author through storytelling. • Develop critical and analytical thinking.
22.	BODAEC2022 (MIL-2)	Mass Media and the Bodo Language	<p>At the end of the course the students shall –</p> <ul style="list-style-type: none"> • Able to develop the concept of mass media. • Able to make competence in news and report writing. • Able to develop the skill of news editing for electronic media. <p>•Teaching Learning Process: Lecture, Assignment, Group Discussion</p>
23.	BODINT2012	Yoga and Human Value	<p>After completing this course students will be able to-</p> <ul style="list-style-type: none"> • Acquire Yogic knowledge for mental and physical development. • Understand moral education and social responsibility in the society. • Understand the benefits of yoga and increased blood flow, right posture, better metabolism, increased flexibility.

Department of Economics

- As per the syllabus which covers up to Sem-IV in Bodoland University syllabus.

Programme Outcome:

The course aims to produce skilled, competent and analysts in different dimensions of economic studies as well as to abled entrepreneurs. The course will boost the ability of analytical and critical thinking skills of the students. Additionally, they will also get to know the economic resources, opportunities and better utilization of it specifically in the north-eastern region of India. Besides, it would lead to students going for higher studies in the selected domain.

Sl No	Course Code	Title of The Course	Course Outcomes
1	ECOMAJ 1014	Introductory Micro Economics	The course introduces the students to the first course in economics from the perspective of individual decision making as consumers and producers. The students learn some basic principles of microeconomics, interactions of supply and demand, and characteristics of perfect and imperfect markets.
2	ECOMIN 1014	Principle of Micro Economics - I	The course introduces the students to the first course in Economics from the perspective of individual decision making as consumers and producers. The students learn some basic principles of microeconomics, Consumer Behaviour and Demand, Theory of Production and Cost, Product Pricing etc.
3	ECOIDC1013	Introduction to Basic Economics-I	Evaluate economic issues related to the environment and natural resources. Analyse international trade patterns and the impact of globalization on economies. Assess the effectiveness of economic policies and their implications for society. Apply economic models and empirical analysis to assess policy outcomes.
4	ECOSEC1013	Economics of Sericulture	Course outcomes for studying the economics of sericulture may vary depending on the level of study (undergraduate or postgraduate) and the specific curriculum. However, some common course outcomes may include the Knowledge of sericulture economics, comprehensive understanding of the economic principles and concepts related to sericulture, including production costs, market structures, pricing strategies, and supply chain dynamics.
5	ECOVAC1014	Sustainable Development -I	By the end of this course, students will be able to understand sustainable development and environmental economics. Analyse the economic implications of environmental issues. Evaluate economic instruments and policy tools for sustainable development. Identify opportunities for sustainable economic growth. Critically evaluate environmental policy frameworks. Develop strategies for promoting sustainable development.
6	ECOMAJ 1024	Intermediate Micro Economics - I	The course trains the students of Economics about the basic elements of consumer theory and production theory and the functioning of the competitive markets. This course aims to give students a solid grasp of microeconomic analysis at the intermediate-level using mathematical techniques where appropriate
7	ECOMIN1024	Principle of Micro Economics - II	The course introduces the students to the first course in Economics from the perspective of individual decision making as consumers and producers. The students learn some basic principles of microeconomics, Consumer theory, Theory of factor pricing and welfare economics.
8	ECOIDC1023	Intermediate to Interdisciplinary Economics	This syllabus provides an outline of the course <i>Intermediate to Interdisciplinary Economics</i> and can be adjusted or expanded based on specific curriculum requirements and preferences of the educational institution offering the course.
9	ECOSEC1023	Tourism Economics	Overall, studying tourism economics equips individuals with the knowledge and skills to understand, analyze, and contribute to the sustainable development of the tourism industry from an economic perspective.
10	ECOVAC1024	Sustainable Development -II	By the end of this course, students will be able to: Understand sustainable development and environmental economics. Analyse the economic implications of environmental issues. Evaluate economic instruments and

			policy tools for sustainable development. Identify opportunities for sustainable economic growth. Critically evaluate environmental policy frameworks. Develop strategies for promoting sustainable development.
11	ECOMAJ 2014	Intermediate Micro Economics - II	This course helps the students to understand efficiency of markets and the environment where the standard market mechanism fails to generate the desirable outcomes. The issues of market imperfection and market failures are important building blocks of this course.
12	ECOMAJ 2024	Introductory Macroeconomics	By the end of the course, students will be able to: - <ul style="list-style-type: none"> • Understand the basic introductory macroeconomics • Analyse macroeconomic data • Apply macroeconomic models • Understand the relationship between money-banking and inflation-unemployment.
13	ECOMIN2014	Principle of Macroeconomics-I	To introduce students to the basic principles of macroeconomics. To familiarize students with the tools and techniques used in macroeconomic analysis. To provide students with an understanding of key macroeconomic concepts such as national income accounting, economic growth, inflation, unemployment, and international trade. To enable students to analyse macroeconomic data and apply macroeconomic models. To develop students' ability to evaluate macroeconomic policy
14	ECOIDC2013	Contemporary Economic Issues	Its aim is to equip the students with sufficient knowledge and skills so as to understand media discussions, and to critically analyze contemporary issues. Such capability is necessary to understand government policies and also to increase people's participation in economic decision-making. The emphasis in this paper will be on conceptual understanding only.
15	ECOSEC2013	Data Analysis	Data Analysis can lead to new insights, discoveries or hypotheses that were previously unknown or not apparent, helping to expand knowledge and understanding.
16	ECOMAJ2034	Intermediate Macroeconomics-I	By the end of the course, students will be able to: Understand the key concepts and theories of macroeconomics. Analyze and evaluate macroeconomic models and theories. Apply macroeconomic concepts to real-world economic issues. Understand the relationship between macroeconomics and other fields of study, such as finance and public policy.
17	ECOMAJ 2044	Statistical Methods for Economics	At the end of the course, the student should understand the concept of random variables and be familiar with some commonly used discrete and continuous distributions of random variables. They will be able to estimate population parameters based on random samples and test hypotheses about these parameters. An important learning outcome of the course will be the capacity to analyse statistics in everyday life to distinguish systematic differences among populations from those that result from random sampling.
18	ECOMAJ2054	Development Economics I	The course will enable the student to understand the theoretical framework of economic growth and development. It will also help them to learn about the entrepreneurship, technology and economic development, poverty and inequality. Besides that it will enable the students to gather knowledge of the various models of economic growth and development.
19	ECOMIN2024	Principle Of Macroeconomics-II	By the end of the course, students will be able to: Understand the advanced principles of macroeconomics; Analyse macroeconomic models and theories; Evaluate macroeconomic policies and their effectiveness; Apply macroeconomic concepts to real-world economic issues.

Department of Education

- As per the syllabus which covers up to Sem-IV in Bodoland University syllabus.

Programme Outcome:

The programme aims to help students to gain knowledge of Philosophy, Sociology, Psychology, Management, and ICT to set the context of teaching profession and advances the capacities in teaching, research and extension work in the field of education. The curricula will also help the students to gain knowledge & skills to deal with Issues related to population, environment, gender equality, different literacy, Yoga & Health Education etc. and respond to emerging issues by applying critical, constructive, and creative thought process. The curricula will also enable the students to use diversified tools & technologies of communications and communication Skills to serve the professional purpose and standards expected from classroom to broader zone of educational activities. Furthermore, the present curricula will develop self-sufficiency, sincerity, independent thinking as education is a lifelong process for empowering the students to face all challenges in their future endeavours.

Course outcome:

SL No	Course Code	Title of the Course	Course Outcomes
1.	EDNMAJ101-4	Introduction to Education	After completion of this course the learner will be able to:- Discuss the basic aims of education and its fundamental concept. Apply knowledge of foundational concept and theories to real world educational scenarios. Develop critical thinking skills to evaluate educational policies, practices and research.
2.	EDNMIN-101-4	Introduction to Education	After completion of this course the learner will be able to: Describe the basic aims of education and its fundamental concept. Apply knowledge of foundational concept and theories to real world educational scenarios. Develop critical thinking skills to evaluate educational policies, practices and research
3.	EDNIDC-101-3	Mental Health and Hygiene	After completion of this course the learner will be able to: Describe the resources available to support mental health, such as counselling services, support groups etc. Communicate more effectively with others about their mental health needs and how to support others who may be struggling with mental health issues.
4.	EDNSEC-101-3	Communication Skills	After completion of this course the learner will be able to: Express their thoughts, ideas and opinions clearly and effectively through spoken language. Use body language, facial expression and tone of voice to enhance their communication. Communicate effectively in diverse contexts.
5.	EDNMAJ-102-4	Psychological Foundations of Education	After completion of this course the learner will be able to: Understand the psychological principles. Apply methods of psychology in teaching-learning process. Learn the importance of educational psychology in teaching-learning process
6.	EDNMIN-102-4	Psychological Foundations of Education	After completion of this course the learner will be able to: Understand the psychological principles. Learn the importance of educational psychology in teaching-learning process. Apply methods of psychology in teaching-learning process.
7.	EDNIDC-102-3	Value and Peace Education	After completion of the course the learner will be able to: Identify the different issues in imparting peace education. Develop the strategies and skills in promoting peace education at institutional level. Identify the role of teacher and family in imparting value education. Discuss the impact of globalization on culture and values.
8.	EDNSEC-102-3	Personality Development and Interview Technique	After completion of this course, learners will be able to: Overcome problems faced in socialization, interpersonal relationship, in communication with other people. → Develop an understanding of self, introspection, self-realization and change in personality of students. Face an interview of career enhancement as well as of job sectors. Build

			confidence, decision making, time management, critical thinking, and stress management.
9.	EDNVAC-102-4	Yoga Education	After completion of this course, learners will be able to: Explore the principles of yogic lifestyles, which may include ethical guidelines, mindfulness and holistic well-being practices. Develop practical skills in various yoga techniques such as Asanas (postures), Pranayama (breathing exercise) meditation and relaxation technique.
10.	EDNMAJ-201-4	Development of Education in India	After completion of this course, learners will be able to: Understand the historical development of education in India, including the ancient, medieval, colonial, post-independence period and the factors that influenced its development. Describe the educational Activities of Missionaries with special reference in Assam. → Discuss women's Education during Vedic, Buddhist and Islamic Period.
11.	EDNMAJ-202-4	Philosophical and Sociological Foundations of Education	After completion of this course, learners will be able to: Develop the reasoning and critical skills and ability to think logically. Compare how philosophy and education are related to each other. Discuss the sociological perspective of education.
12.	EDNMIN-201-4	Development of Education in India	After completion of this course, learners will be able to: Understand the historical development of education in India, including the ancient, medieval, colonial, post-independence period and the factors that influenced its development
13.	EDNIDC-201-3	Environmental and Population Education	After completion of this course, learners will be able to: Gain command over the environmental components and present emerging problems of environment and develop critical thinking among students. Focus on environmental degradation and analyse the real world problems. Develop a power of narrative to create sustainable solutions for local and global communities. Acquire a responsible environmental behavior and participate in protection of environment, population control, maintain quality health and education. Understand on population growth and problems related to population explosion.
14.	EDNSEC-201-3	Methods and Techniques of Teaching	After completion of this course, learners will be able to- Explain the meaning and nature of teaching. Discuss the principles of teaching and learning. Understand the importance of teaching aids in the class room. Explain the importance of planning lessons in teaching learning process.
15.	EDNMAJ-203-4	Educational Guidance and Counselling	After completion of this course, learners will be able to- Understand the principles of guidance and its characteristics. Learn about different types of guidance. Understand the role of teacher and the head of the institutions in guidance and counselling.
16.	EDNMAJ-204-4	Educational Measurement and Evaluation	After completion of this course, learners will be able to-Understand the role of assessment in the instructional process including the proper evaluation of assessments and standardized tests. Measure pupils' achievement and motivate pupils' learning along with intelligence quotient.
17.	EDNMAJ-205-4	Educational Technology	After completion of this course, learners will be able to- Discuss the content and Assumption of instructional technology. Explain the characteristics of instructional technology. Differentiate between educational Technology and Instructional technology. Highlight the uses of Computer in education. Identify the advantages and disadvantages of computer Assisted Instruction. Explain types of classroom communication, verbal, non –verbal. State the barriers of effective communication in the classroom.
18.	EDNMIN-202-4	Educational Guidance and Counselling	After completion of this course, learners will be able to- Understand the principles of guidance and its characteristics. Learn about different types of guidance. Understand the role of teacher and the head of the institutions in guidance and counselling.
19.	EDNINT-201-2	Internship	After completion of this course, learners will be able to- Get an opportunity to get hired by the Industry/ organization. Gain practical experience in an organizational setting. Get an opportunity to see how the theoretical aspects learned in classes are integrated into the practical world. Get on-floor experience that provides much more professional

			experience which is often worth more than classroom teaching. Decide if the industry and the profession is the best career option to pursue. Learn new skills and supplement knowledge. Practice communication and teamwork skills. Learn strategies like time management, multi-tasking etc in an industrial setup. Meet new people and learn net working skills. Make a valuable addition to their resume. Gain knowledge about their candidacy for higher education. Create network and social circle and develop relationships with industry people. Evaluate the organization before committing to a full time position
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Department of English

Programme Outcome:

The Under Graduate programme in English offered by Bodoland University is designed as per the FYUGP, NEP 2020. English as a subject, ranges over a lot of areas of study and disciplines of thought and discourse. The purpose of the syllabus is to acquaint the students not just with English but also to familiarise them with the English writings of the common wealth and as well as other continents. So, along with English, they study American, South Asian, African, Afro-American, post-colonial, north-eastern and Indian literature.

Programme Specific Outcomes (PSOs):

- Students will be exposed to different genres of literature produced not only by the English writers but also by writers from different continents.
 - To promote intercultural and artistic correspondence there are papers of comparative literature and translation studies.
 - To give a contemporary relevance to the syllabus, there are papers of media studies and film studies as optional papers. These are the papers which can give a cutting edge to the students from career angle.
 - To cope up with the global trend and understanding, there are papers of Criticism and Critical Theory.
 - Students shall be exposed to literatures not just from centres, but also from the periphery using English as the gateway.
 - The syllabus maintains a substance with social sciences for a realistic understanding of life and experiences.

Course outcome:

SL No	Course Code	Title of the Course	Course Outcomes
1.	ENGMAJ101-4	History of English Literature	Students will acquire a sense of the historical development of British literature and ideas. Students will gain an understanding of the contexts in which social spirits, literary forms and individual texts emerge.
2.	ENGMIN101-4	Poetry	Having done this paper, students will have a basic idea about what English poetry is or poetry written in English language in different parts of the world by either Anglophone writers or otherwise. By going through this paper students will develop an interest in the subject that will make them motivated to move forward in their pursuit of English Literature.
3.	ENGIDC101-3	Environmental Humanities	Students will be able to identify specific works of literature that deal with the environment; students will learn about the critical terms and methodology used in Environmental Humanities.
4.	ENGAEC101-2	English Communication-1	The communication and language skills of the students will improve; Students will display knowledge of key concepts and theories on communication; Learners will be able to communicate with their peers and write effectively.

5.	ENGSEC101-3	English Language Teaching	Students will gain an understanding of the key concepts and theories of English Language Teaching; Learners will be familiar with the various approaches, methods and techniques of ELT
6.	ENGMAJ102-4	English Literature: From the Age of Chaucer to Augustan Age	The students develop an overall knowledge of 18th and 19th-century poetry and drama and the writers' contribution to that particular period. It is expected that after reading this course, the students will have a fair idea about the historical, cultural and political contexts as well as the thematic and stylistic variations of the English literary works composed between 18th and 19th century
7.	ENGMIN102-4	Essays and Letters	After completing this course students will have a fair amount of idea about what is English Essays and Letters written in different parts of the world. By going through this paper students will develop an interest in the subject to move forward in their pursuit of English Literature.
8.	ENGIDC102-3	Individual and Society	Students will learn how art and literature can have an alternate way of addressing issues that afflict mankind.
9.	ENGAEC102-2	English Communication-2 Credit	Enhancing communication skills along with language and presentation skills of the students; They will be able to participate in group discussions, meetings and interviews; Students will be able to draft Official Letters, Notices, Agendas, Résumé and Minutes effectively.
10.	ENGSEC102-3	Advanced English Grammar and Composition	Students will be able to analyse the structure of any phrases in English; They will be able to write grammatically correct sentences and will be able to differentiate between varieties of English
11.	ENGMAJ201-4	Classical Literary Criticism	To acquaint the students with classical forms of criticism.
12.	ENGMAJ202-4	Classical Literature	Students will be able to appreciate Indian and western classical tradition. Studying this course as a part of the English Under Graduate Syllabus will help in a comparative analysis of western traditions. Whereas postcolonial literature draws its impetus mostly from Western canonical literatures, this course will help students in decolonizing English studies.
13.	ENGMIN201-4	Life Writing & Travel Writing	Students will be able to identify and appreciate various kinds of life writings. They will be able to distinguish between the various forms and techniques adopted by the biographers and autobiographers.
14.	ENGIDC201-3	Women and Empowerment	Students will be able to identify gendered violence and systemic violence that prevail in society. Students will be gender sensitized and will be able to participate in women empowerment.
15.	ENGAEC201-2	Academic Writing and Composition I	Students will be able to draft various academic and technical writings, letters, notices, agendas and minutes effectively. They will be able to master various aspects of academic writing and execute it effectively.
16.	ENGSEC201-3	Translation Theory and Practice	After the completion of this course, students would be able to study translation as a cultural process and interpretation act.
17.	ENGMAJ203-4	Literary Criticism	Students will be able to identify the theories and methods of criticism. Students will be acquainted with the varied dimensions of theoretical approaches.
18.	ENGMAJ204-4	British Romantic Literature	Students will be able to identify the ideals of the French Revolution and its lasting impact on world literature. They will understand how literature can be instrumental to bring social changes. They will be acquainted with ideas relating to Environmental Humanities and critical approaches like Deep Ecology and Ecocriticism.
19.	ENGMAJ205-4	English Prose	The course will help developing the writing skill and critical thinking ability of the students on a given topic.
20.	ENGMIN202-4	Drama	Students will be able to identify the technical aspects and rhetoric features of a play.
21.	ENGAEC202-2	Academic Writing and Composition 2	After completing the course students will be able to differentiate between academic, non-academic and quality writing. They will be able to master various approaches, methods and techniques of academic writing.

22	ENGMAJ301-4	Indian Writing in English	Students will be able to identify the influence of British literature on IWE. Students will be able to understand the social context that shaped IWE. Students will be able to relate to the cultural and political aspects that inform such literatures.
23	ENGMAJ302-4	Modern European Drama	Students will be able to appreciate the role of realism, naturalism and existentialism in shaping Modern European Drama.
24	ENGMAJ303-4	British Literature: 19 th Century	Students will be able to relate society with Literature. They will be able to identify the structures, forms and aspects of novels and poems.
25	ENGMAJ304-4	Rhetoric and Prosody	Students will be able to identify the use of rhetorical devices in literary texts. They will be able to scan poems and will learn about the intonation used in reading poems. This course will enhance their writing skills as well.
26	ENGMIN301-4	Introduction to Indian Writing in English	Students will be able to identify the influence of British literature on IWE. Students will be able to understand the social context that shaped IWE. Students will be able to relate to the cultural and political aspects that inform such literatures.
27	ENGMAJ305-4	Critical Theory I	Students will be able to identify the theories and methods of criticism. Students will be acquainted with the varied dimensions of theoretical approaches.
28	ENGMAJ306-4	British Literature: The Early 20th Century	Students will be able to critically interpret the texts through various theoretical lenses. Students will be able to relate the influence of such texts on Indian literature.
29	ENGMAJ307-4	Postcolonial Literature	Students will be able to identify the systemic continuation of colonial structures and their influence in the present times. Read in conjunction with decolonial studies, students will be able to differentiate between the two.
30	ENGMAJ308-4	American Literature	Students will be able to identify the challenges of the American Dream and its social issues.
31	ENGMIN302-4	Fiction	The students will be able to critically appreciate short story and novel as a form. They will be acquainted with plot, discourse, structure, narrative art and characters in fictional texts.
32	ENGMAJ401-4	Critical Theory II	Students will be able to identify the theories and methods of criticism. Students will be acquainted with the varied dimensions of theoretical approaches.
33	ENGMAJ402-4	African Literature	Students will be able to relate to the colonial context and the ideological influences. Students will know about the cultural and social life in African societies.
34	ENGMAJ403-4	Introduction to Linguistics	: Students will be able to comprehend various linguistic terminologies in a scientific way. They will be able to do phonetic transcriptions, besides mastering word stress, rhythm and intonation
35	ENGMAJ404-4	Anglophone Writing from Northeast India	Students will demonstrate an understanding of the social and cultural context of literary writings. They will be able to understand the intersection between literature and politics. They will also demonstrate knowledge of the key texts and oral literature.
36.	ENGREM404-4	Research Methodology	Students will demonstrate their understanding while writing research papers and dissertations.
37.	ENGMIN401-4	Introduction to writing from Northeast India	Students will demonstrate an understanding of the social and cultural context of literary writings. They will be able to understand the intersection between literature and politics. They will also demonstrate knowledge of the key texts and oral literature.
38.	ENGMAJ405-4	Women's Writing	Students will demonstrate the ability to understand the issues that are addressed by women. Students will demonstrate knowledge about topics such as gender politics, caste politics, masculinity and patriarchy.
39.	ENGMAJ405-4	Introduction to Women's Writing	Students will demonstrate the ability to understand the issues that are addressed by women. Students will demonstrate knowledge about topics such as gender politics, caste politics, masculinity and patriarchy.
40.	ENGDIS401-12	Dissertation	Students will be able to write a research proposal and a dissertation.
41.	ENGADL401-4	Contemporary South Asian Fiction	Students will acquire a sense of the socio-cultural, political and historical development of the South Asian nations as presented in the respective novels set in the context of these locations. They will gain an understanding

			of the contexts in which social developments, historical events and individual texts emerge.
42.	ENGADL402-4	Decolonial Studies	The paper refrains from providing an exhaustive examination of colonial epistemology and global structure. Instead, it acknowledges the vantage point of the academic, critic, and individual speaking, emphasizes the importance of decentering and pluralizing knowledge patterns, and proposes alternative approaches to understanding and experiencing the world at large.
43.	ENGADL403-4	Literature from Assam in English Translation	This course will offer the students a fair idea about different literary voices in Assam. It will further intrigue them to delve deep into the literary works produced by the region and engage in critical assessment of the works

Department of History

Programme Outcome:

The Under graduate (UG) course offered by the department of History, Bodoland University, adheres to the FYUGP, NEP. The goal of the course is to produce competent and skilled researchers in scientific History who can be employed in academic researches and implement their gained knowledge in the areas of general history, history of ecology and environment, tools and technology, and regional history. They can also be employed in national services of India. The course is also designed to improve the critical thinking, scientific attitude, research aptitude and providing solution to the research problems. This leads to solution to the practical problems. Thus, they are trained for competitive examinations and research related jobs and they are imparted knowledge on ethical values, culture and tradition of Indian society since ages, environmental awareness.

Programme Specific Outcome (PSO):

1. The students shall learn about the region from the ancient times to modern. They learn about their society, economy and culture.
2. They shall learn about the national movement in India and writing trends on national movement in India.
3. The students shall learn about the history of India from ancient times to modern ranging from society, culture, economy, politics of all the periods according to periodisation of history.
4. The students shall be imparted knowledge on research methodology in history and historiography of different periods of the world.
5. They are also imparted knowledge on recent trends in history, e.g., history of ecology and environment, history of tools and technology, gender history.
6. They will also possess knowledge on framing of the constitution of India and its history. Moreover, they will also have an idea on international relations.

Course outcome:

SL No	Course Code	Title of the Course	Course Outcomes
1.	HISMAJ1014	Introduction to Ancient Indian History	After the completion of this course, students will learn about ancient history of India. They will come to know about pre-historic period, ancient civilization of India, state formations, some of the prominent dynasties of ancient India and foreign invasions.
2.	HISMIN1014	History of Indian Civilisation	The students will be able to learn the history first and second urbanizations as well as importance of tools. They will learn the beginning of urban centres as well institutional establishments during that period. Thus, this course will enlighten the students with socio-cultural as well as political.

3.	HISIDC1013	History of Ancient India	The students will be able to learn the history of evolution of society and tools. The achievement of civilization based on bronze and iron will make the students popular. They will learn the beginning of urban centres as well institutional establishments during that period.
4.	HISSEC1013	Introduction to Archaeology	Students shall gain knowledge about archaeology and its aspects. Upon the end of this course, students will learn the basics of archaeology. They will learn about the aims and scopes of archaeology and its different methods. Moreover, students will also learn the dating methods of archaeology.
5.	HISMAJ1024	Introduction to Medieval Indian History	Students shall acquire the knowledge of medieval Indian History. Upon completion of this course, Students will be able to analyse the political and social developments in India between 1206 to 1757 A.D. Students will be able to explain the formation of different states during this period along with their administrative mechanism and the society, economy and culture of India in the thirteenth to mid eighteenth-century period.
6.	HISMIN1024	Ancient Indian History (Society, Polity & Economy)	The students will be able to learn the history of society, polity and economy with the evolution of states. The cultural assimilation in the study period is significant. Thus, this course will enlighten the students with socio-cultural as well political.
7.	HISIDC1023	History of Medieval India	Students shall acquire the knowledge of medieval Indian History. Upon completion of this course, students will be able to understand the political, social and economic conditions of medieval India. Students will be able to understand different sources for the reconstruction of medieval Indian history of the Sultanate and Mughal empires. Moreover, students will also be able to understand religious and economic policies of the period.
8.	HISSEC1022	Introduction to Travel & Tourism Management	The students will be able to learn importance of tourism and its management base on landscape and historical monuments.
9.	HISVAC1024	Introduction to Modern Indian History	The students will be able to learn the history of modern India. They will learn the beginning of colonialism in India, colonial policies, policy of expansion and consolidation. Thus, this course will enlighten the students with British policies towards native rulers of India from 1757 onwards till independence in 1947.
10.	HISMAJ2024	National Movement in India	This course will provide a vast of emergence of nationalism among the people of India and different phases of national movement. Moreover, students will also learn about the policies adopted by the colonial rulers in India to suppress national movement in India. This course will benefit the students by giving first-hand knowledge on national movement in India and students will also be benefitted for any of the competitive examinations in India.
11.	HISMIN2014	Medieval Indian History (Society, Polity and Economy)	Upon completion of this course, students will be able to analyse the political, social and economic developments in India between 1206 to 1757 A.D. Students will be able to understand different sources for reconstruction of medieval Indian history and expansion of the Sultanate and Mughal empires. Moreover, students will also be able to understand religious and economic policies of the period.
12.	HISIDC2013	History of Modern India	After the completion of this course, students will learn the basic elements of history of modern India. Moreover, students will also be partially acquainted with some portions of the syllabus of national level competitive examinations partially.
13.	HISMAJ2034	Concept and Method of History	After the completion of this paper, students will learn the definition, nature and scope of history, and its relation with other allied disciplines. Moreover, they will also learn different sources for reconstruction of history and different types of history. They will also learn history writing tradition in ancient times and writing trends in India as well. Thus, this paper will benefit the students in basic understanding of history as a discipline.
14.	HISMAJ2044	Pre and Proto History of India	Students shall gain access to the Pre and Proto History of India. The students will be able to learn the stages of the evolution of society and tools. They will learn about the emergence of the first urbanization in the Indian subcontinent. Thus, this course will enlighten the students from hunting

			and gathering to an urban civilization on the bank of Sindhu River and its tributaries.
15.	HISMAJ2054	History of Assam (Earliest To 1228 A.D.)	The students will be able to learn the history of ancient Assam. They will learn the beginning of states in the Brahmaputra valley based on the social stratification. The idea of ancient state based on theory will be understood by the students. Thus, this course will enlighten the students with the history of ancient Assam especially; political, social, economy and religion.
16.	HISMIN2024	Modern Indian History (Society, Polity and Economy)	The students will be able to learn the history of modern India. They will learn the beginning of colonial policies, policy of expansion and consolidation. Moreover, students will learn about society and economy of the period. Thus, this course will enlighten the students with British policies, society and economy of India from 1757 onwards till independence in 1947.

Department of Nepali

Programme Outcome:

- Prepare students for pursuing research or careers in Nepali Literature and Language.
- Continue to acquire relevant knowledge and skills appropriate to professional activities and demonstrate highest standards of ethical issues in literary field.
- Equip the students with skills to analyse problems, formulate an hypothesis, evaluate and validate result, and draw reasonable conclusions thereof.
- Inculcate critical thinking to carry out literary investigation objectively without being biased with preconceived notions.
- Create awareness to become an enlightened citizen with commitment to deliver one's responsibilities within the scope of bestowed right and privileges.

Programme Specific Outcomes:

- Prepare and motivate students for research studies in Nepali literature & Language.
- Provide knowledge of a wide range of literary techniques and application of literary theories methods in scientific way.
 - Good understanding of theories which can be used to critical analysis.
 - Assist students in preparing (personal guidance, books) for competitive exams. e.g. NET, SLET, etc.

Course outcome:

SL No	Course Code	Title of the Course	Course Outcomes
1.	NEPMAJ 1014	History of Nepali Literature (नेपाली साहित्यको इतिहास)	Students shall get acquainted with the history of Nepali Literature. This paper intends to provide a brief knowledge of Nepali language and literature to the students. After completing this course students will be able to- <ul style="list-style-type: none"> a) Understand the background of literary history of the Nepali literature. b) Realize life and society of the community. c) Demonstrate critical and analytical approach in literature review

2.	NEPMIN 1014	Selected Nepali Poem (केही प्रमुख नेपाली कविता)	Students shall come to terms with some selected poems written by Nepali poets. At the end of the course the students shall understand – a) About the trend of old Nepali poetry. b) About mystic and romantic poems composed during the period. c) About the poems composed to bring social awareness among the mass
3.	NEPIDC 1013	Nepali Poem (नेपाली कविता)	Students shall come to know about Nepali poems which have galvanised the domain of Nepali literature since its inception. At the end of the course the students shall – a) Able to define the elements of poetry and aesthetic attribute. b) Understand the poetry as a means of transference of human emotions, feeling and human psychology. c) Able to demonstrate skill for using emotional language in the form of poetic expression. d) Able to develop self-expression and structural creativity based on life and social space.
4.	NEPAEC 1012	Functional Nepali (कार्यात्मक नेपाली)	Students shall get acquainted with the functional aspects of the Nepali language. At the end of the course the students shall – a) Able to develop linguistic competence. b) Able to identify the language functions in the spoken discourse. c) Able to demonstrate ability of expression by improving grammatical skill. d) Able to discuss topic in a group
5.	NEPSEC 1013	Uses of Computer in Nepali Language कम्प्युटरमा नेपाली भाषाको प्रयोग	Students shall get to know about Computer typing in Nepali language. After completing this course students will be able to- a) Acquire pragmatic knowledge of computer language. b) Understand application of computer how to use and control to create file and folder. c) Demonstrate ability of software, Internet and Website to handle contemporary needs.
6.	NEPMAJ 2014	Selected Nepali Short Story (केही प्रमुख नेपाली कथा)	Students shall gain knowledge of some selected short stories written in the Nepali language.
7.	NEPMIN2014	Selected Nepali Short Story (केही प्रमुख नेपाली कथा)	Students shall gain knowledge of some selected short stories written in the Nepali language.
8.	NEPIDC 2013	Nepali Short Story and Essay (नेपाली कथा र निबन्ध)	Students shall gain access to Nepali short stories and essays which have dominated Nepali literature.
9.	NEPAEC 2012	Nepali Letter and Script (नेपाली वर्ण र लिपि)	Students shall get to know of the linguistic aspects of the Nepali language. At the end of the course the students shall – a) Understand basics of language and linguistic features. b) Able to realize linguistic application in discourse context. c) Able to develop linguistic skill and script grammar. d) Able to acquire competence for effective language, linguistic and script in diverse context of speaking and writing.
10.	NEPSEC 2013	Folklore and Tourism of Assam लोकसंस्कृति र असममा पर्यटन	Students shall gain knowledge about aspects of folklore its definition and certain aspects of tourism in Assam. After completing this course students will be able to- a) Facilitate students to realize distinctive features of folk literature. b) Understand cultural identity of the community. c) Understand the social functions of the folklore in the social sphere. d) Facilitate students to understand traditional knowledge acquired and transmitted generation to generation. e) Understand about relation of man with ecology that will

			make student environment conscious and this is very important in present times. d) Facilitate to create greater insight to life and way of living. e) Understand ethical and moral values of life.
11.	NEPMAJ 3014	Western Literary Criticism (पाश्चात्य समालोचना साहित्य)	Students shall get acquainted with Western literary criticism which forms the backbone of contemporary world literature. Acquire Come to know about theory and concept of Western literary criticism. a) Understand about the concepts of tragedy, comedy, tragi-comedy, tragic hero, hamartia, concept of time, sublimity, etc.
12.	NEPMAJ 3024	Eastern Literary Criticism. (पूर्वीय समालोचना साहित्य)	Students shall gain access to Eastern literary criticism majority of which shall be Indian writers of the remote past. After completing this course students will be able to- a) Acquire Come to know about theory and concept of eastern literary criticism. b) Understand about the uses of <i>Rasa</i> , <i>Chanda</i> and <i>Alankara</i> with special reference to Nepali literature. c) Know the Chanda used in poetry of Nepali literature in early as well as modern literature.
13.	NEPMIN 3014	Selected Nepali Essay (केही प्रमुख नेपाली निबन्ध)	Students shall get acquainted with Nepali Essays written in different periods of time.
14.	NEPIDC 3013	Nepali Novel and Drama (नेपाली उपन्यास र नाटक)	At the end of the course the students shall understand – a) About the background of modern Nepali dramas and different types of novels in Nepali literature. b) About the social pictures displayed in modern drama of the era. c) About modern period of Nepali drama and novels d) About the aestheticism of modern Nepali drama and its historical trends. e) About the dramatic art and literary value. f) About the reality of life and literary importance of few selected dramas in Nepali.
15.	NEPAEC 3012	Creative Writing (सिर्जनात्मक लेखन)	Students shall gain knowledge about the different aspects related to creative writing.
16.	NEPSEC 3013	Language Teaching (भाषा शिक्षण)	Students shall gain knowledge about the ways of language teaching.
17.	NEPMAJ 4014	General Linguistics (सामान्य भाषा विज्ञान)	After completing this course students will be able to- a) Gather general idea about language and linguistics. b) Acquire considerable knowledge of the linguistic level of human speech of how languages are well-ordered in case of phonological, morphological, syntactic and semantic process; c) Understanding of how the structures vary language to language, of how language changes through the ages; d) Understand functions of language, human knowledge that is generated through linguistic discourse.
18.	NEPMAJ 4024	Background of Nepali Language and Script. (नेपाली भाषा र लिपिको पृष्ठभूमि)	Students shall get knowledge about the background of Nepali language and the script i.e. Devnagri.
19.	NEPMAJ 4034	Nepali Drama and one Act Play (नेपाली नाटक र एकाङ्की)	Students shall come to be aware of the domain of Nepali Dramas and One Act plays.
20.	NEPMIN 4014	Nepali Society and Culture (नेपाली समाज र संस्कृति)	At the end of the course the students shall understand – a) About the general concept of culture and its characteristics. b) The relation between folklore and society. c) About diffusion, acculturation and assimilation of culture.
21.	NEPAEC 4012	Translation Study (अनुवाद अध्ययन)	After successful completion of the course student will be able to-

			<p>a) Understand the concept of translation and types of translation and its applicability in literature.</p> <p>b) Know the need and importance of translation.</p> <p>c) Understand the sociological significance of language, literature and culture.</p>
22	NEPMAJ 5014	Nepali Epic (नेपाली महाकाव्य र खण्डकाव्य)	Students shall gain knowledge of the Nepali epics written during different periods of time.
23	NEPMAJ 5024	History of Literary Criticism and Nepali Literary Criticism (समालोचनाको इतिहास र नेपाली समालोचना)	After completion of the course, students shall gain new insight into literary criticism as a whole and Nepali criticism as well.
24	NEPMAJ 5034	Nepali Translation Literature (नेपाली अनुवाद साहित्य)	Translation literature in its diverse forms shall be disseminated among the students through this course.
25	NEPMAJ 5044	Contemporary Nepali Poem समसामयिक नेपाली कविता	Students shall come to know about contemporary Nepali poetry.
26	NEPMIN 5014	Nepali Novel नेपाली उपन्यास	After completing this course students will be able to- Gain knowledge about the different genres of Nepali novels.
27	NEPMAJ 6014	Nepali Folk Literature नेपाली लोक साहित्य	The completion of course would lead to increase of knowledge base of the students in relation to the diverse features of Nepali Folk literature.
28	NEPMAJ 6024	Nepali Novel नेपाली उपन्यास	After completing this course students will be able to- a) Gather general idea about language and linguistics.
29	NEPMAJ 6034	Comparative Literature तुलनात्मक साहित्यको अध्ययन	Students shall be able to understand about Comparative literature and its aspects.
30	NEPMAJ 6044	Children Literature नेपाली बाल साहित्य	After completing this course students will be able to- Understand the diverse features of Children literature and its importance in the domain of literature.
31	NEPMIN 6014	Introduction of Nepali Literature (नेपाली साहित्यको परिचयात्मक इतिहास)	After completing this course students will be able to- Get acquainted with Nepali literature since its inception.
32	NEPMAJ 7014	Contemporary trends of Nepali Criticism नेपाली समालोचनाता समकालीन आधारहरू	Students shall be able to gain knowledge about contemporary trends of Nepali criticism.
33	NEPMAJ 7024	Study of Assamese and Bodo Literature (असमीया र बोडो साहित्यको अध्ययन)	After the completion of this course students shall be able to gain insight into the aspects of Assamese and Bodo literature.
34	NEPMAJ 7034	World Literature विश्व साहित्य	Students shall be able to gain insight into the divergent aspects of literature prevailing throughout the globe.
35	NEPMAJ7044/NEPREM 7044	Research Methodology शोध प्रविधि	Students shall get acquainted with the different
36.	NEPMIN 7014	Eastern Criticism पूर्वीय समालोचना	After completing this course students will be able to- a) Acquire Come to know about theory and concept of eastern literary criticism. b) Understand about the uses of <i>Rasa</i> , <i>Chanda</i> and <i>Alankara</i> with special reference to Nepali literature. c) Know the <i>Chanda</i> used in poetry of Nepali literature in early as well as modern literature.
37.	NEPMAJ 8014	Culture of Assam (असमको संस्कृति)	Students shall gain knowledge about the culture of Assam. Able to understand community history and traditions.

			<p>a) Able to realize social philosophy and helps to preserve our culture and heritage.</p> <p>b) Understand more about Ethical and moral values.</p> <p>c) Know more about social responsibility as a member of society.</p> <p>d) Give unique opportunity to exchange cultural views which promotes social harmony</p>
38.	NEPMIN 8014	Western Criticism. पाश्चात्य समालोचना	Students shall gain knowledge about Western literary criticism including the Greeks and the Romans.
39.	Research NEPMAJ 8024	Dissertation OR	Students shall be able to prepare themselves for the future endeavors in the domain of research by writing dissertation.
40.	NEPMAJ 8034	Biography and Autobiography (जीवनी र आत्म जीवनी)	Students shall gain knowledge about aspects of bio-graphy and auto-biography including selected biographies and autobiographies written in the Nepali language.
41.	NEP MAJ 8044	Sabai and Lahari Sahitya (सवाई र लहरी साहित्य)	After the completion of this course students shall come to know of the ballad like lengthy poems written during the medieval period of Nepali literature.

Department of Philosophy

Programme Outcome:

The Under Graduate course in Philosophy Honours initiates students to Epistemology and Metaphysics, Logic, Indian Philosophy, History of Modern and Western Philosophy and Ethics, Philosophy of Religion and Existentialism. The course develops interests in learning philosophy with clarity and analysing philosophical concepts with philosophical reflection and analysis. The course also helps to develop critical thinking.

Course outcome:

SL No	Course Code	Title of the Course	Course Outcomes
1.	(PHLMAJ-1014)	Greek Philosophy	Upon completion of the course, students will be able to understand the philosophical principles of Greek Philosophy along with the epistemology and metaphysical problems of Philosophy.
2.	PHLMIN –1014	Indian Philosophy	Upon completion of the course, students will gain detailed knowledge about the Outline of Indian Philosophy and the different schools of Indian thought like Cārvāka, Jainism and Buddhism.
3.	PHLIDC – 1014	Social and Political Philosophy	Upon completion of the course, students will be able to understand the relationship between family and society, state, equality and social progression as a whole.
4.	PHLSEC – 1013	Professional Ethics and Insurance	Upon completion of the course, students will be able to understand the meaning of ethics, professional ethics and individual progression.
5.	PHLVAC – 1014	Ethics and Values	Upon completion of the course, students will be able to understand ethical values and duty with philosophy. perspective.
6.	PHLMAJ –1024	Fundamentals of Logic	Upon completion of the course, students will be able to know arguments and its forms along with formal techniques used for evaluating arguments as valid and invalid. They will also understand the idea of

			set and set relations and apply diagrammatic method of testing arguments involving sets.
7.	PHLMIN 1024	Logic	Upon completion of the course, students will be able to know the argument and its forms along with formal techniques used for evaluating arguments as valid and invalid.
8.	PHLIDC 1013	Philosophy of Religion	Upon completion of the course, students will be able to understand the students about religious ideology, religious language, symbolism, freedom of will, faith, reason and revelation.
9.	PHLSEC 1023	Critical Thinking	Upon completion of the course, students will be able to understand the situation and apply the thought, solving problems in competitive examinations.
10.	PHLVAC – 1024	Yoga and Health	Upon completion of the course, students will be capable of understanding about the importance of Yoga, health and meditation
11.	PHLMAJ 2014	Methods and Conceptions of Philosophy (Indian approaches)	Upon completion of the course, students will be capable of understanding about the Indian theory of Knowledge.
12.	PHLMAJ 2024	Formal Logic	Upon completion of the course, students will be capable to prove the validity of arguments, argument and argument forms. To apply the rules of inference in both propositional and predicate logic.
13.	PHLMIN 2014	General Philosophy	Upon completion of the course, students will be able to understand the Philosophical perspective of realism, idealism, space and time, test of truth.
14.	PHLIDC – 2013	Environmental Ethics	Upon completion of the course, students will be aware of the environmental ethics for the better sustainability of the development.
15.	PHLSEC – 2013	Logic & Reasoning	Upon completion of the course, students will be capable to prove the validity of arguments, arguments and argument forms
16.	PHLMAJ 2034	Methods and Conceptions of Philosophy (Western approaches)	Upon completion of the course, students will be able to know the types of philosophy and the study of the great thinkers. Upon completion of this course, students will be able to understand the epistemological and metaphysical perspectives of the philosophers like Descartes, Spinoza, Leibnitz, Locke, Berkeley, Hume, Kant, Hegel etc
17.	PHLMAJ 2044	(Western Philosophy)	Upon completion of the course, students will be able to learn and understand the subject matter contemporary western philosophy
18.	PHLMAJ2054	Philosophy of Vienna Circle	Upon completion of the course, students will be able to learn understand with the subject matter of contemporary western Philosophy.
19.	PHLMIN 2024	Indian Philosophy (Orthodox)	Upon completion of the course, students will benefit with the knowledge of Six major schools of Indian Hindu Philosophy, the concept of truth and knowledge, the concept of ethics, happiness, moksha, way to moksha.
20.	PHLINT–2012	Internship	Upon completion of the course, students will be able to apply fundamental and disciplinary concepts and methods to the principal areas of study. They will also develop the skills and knowledge of specific professional fields of study.
21.	PHLMAJ 3014	Philosophy of Religion	Upon completion of the course, students will be aware of Life beyond parochialism and the relativity of religious believes.
22.	PHLMAJ 3024	Philosophy of Language, Truth & Meaning	Upon completion of the course, students will be visiting life in matters of our discovery of life. Lofty and greater treatments in matters of language, meaning and truth will be dawned upon in the young mind
23.	PHLMAJ 3034	Phenomenology and Existentialism	Upon completion of the course, students will be able to understand the nuances of the individual life. The study enhance democratic treatment at large thereby creating new awareness to life at large.
24.	PHLMAJ 3044	Philosophy of Art and Culture	Upon completion of the course, students will be able to understand life to the tune of time-tested values of Indian Art and Culture. Life of resilience would be inculcated in the young mind.
25.	PHLMIN3014	Indian Classic Scriptures	Upon completion of the course, students will be able to understand Life, and deep-rooted in philosophy will be understood. Life distorted segregation in the so-called modern waves will have a meaning.

26	PHLMAJ -3054	Applied Ethics	Upon completion of the course, students will be able to learn the ethical issues from practical point of view relating to different aspects such as Bio-medical ethics, Animal and Land ethics and IPRs
27	PHLMAJ 3064	Philosophy of Logic	Upon completion of the course, students will know the relation between logic and other fields of logic such as Generality, Form, and logician second order vocabulary.
28	PHLMAJ 3074	Indian Logic	Upon completion of the course, students will develop analytical mindsets along with critical thinking.
29	PHLMAJ3084	Contemporary Indian Philosophy	Upon completion of the course, students will understand the life urgencies in matters of socio – cultural aspects. They will understand religion, life and morality from a modern perspective.
30	PHLMIN - 3024	Buddhism	Upon completion of the course, students will be able to understand Buddhism and his teachings. They will also learn that Buddhism is one of the most disciplined schools of philosophy
31	PHLMAJ –4014	Western Philosophy	Upon completion of the course, students will learn and understand the subject matter of contemporary western philosophy.
32	PHLMAJ –4024	Comparative Religion	Upon completion of the course, students will be able to describe some of the basic principles of Hinduism, Islam, Christianity, Buddhism and Jainism. They will be able to compare the basic principles of one religion to another religion
33	PHLMAJ –4034	Many Valued Logic	Upon completion of the course, students will be able to apply basic concepts of MVL to solve problems at various levels. Apply MVL diverse physics related fields like design of electronic circuits and tests circuits for faults and defects. Understand and throw substantial light on the issue of relativism. Apply MVL in quantum mechanics.
34	PHLMAJ –4044	Philosophy of Science	Upon completion of the course, students will be knowing the key questions like, what counts as science, about the scientific method and about the scientific theories and its source of knowledge
35	PHLMAJ-4054	Research Methodology	Upon completion of the course, students will be capable of developing skill in qualitative and quantitative data analysis and presentation, the ability to choose methods appropriate to research aims and objectives, and research design.
36.	PHLMIN-4014	Indian Ethics	Upon completion of the course, students will know about the ethical systems of Indian philosophy and how to establish moral principles and standards of human behaviour
37.	PHLMAJ 4064	Meta-Ethics	Upon completion of the course, students will understand the metaphysical, epistemological and commitment of moral thought and practices
38.	PHLMIN-4024	Political Philosophy	Upon completion of the course, students will be able to analyze a variety of problems in political philosophy and compose the fundamental qualities of the relation of ethics and politics.
39.	PHLADL 4024 OR (PHLADL 4024 + PHLADL 4034 + PHLADL 4044)	Dissertation on Research Project	Upon completion of the course, students will be capable of developing their writing research papers and presentations. They will have the ability to choose methods appropriate to research aims and objectives and research design.
40.	PHLADL4024	Review of Literature and Research Publication	
41.	PHLADL4034	Research Proposal Writing	
42.	PHLADL4044	Philosophy of Gita	Upon completion of the course, students will be able to find the purpose of human values and to live with it fully.

Department of Political Science

- As per the syllabus which covers up to Sem-IV in Bodoland University syllabus.

Programme Outcome:

Political Science undergraduate program was born out of recognition of the increasing significance of cross-disciplinary studies in the social sciences. The program is organized around the combined perspectives and analytical tools of Sociology, Political Science, International Relations, and History.

1. Develop knowledge of theories, concepts, and research methods in humanities and social sciences.
2. Assess how global, national and regional developments affect society.
3. The Political Science degree furnishes the students with a unique multidisciplinary approach in social sciences and prepares them for further academic study and for careers in the public and the private sector.

Programme Specific Outcomes:

1. Understand the world, country, society and have awareness of ethical problems, social rights, values and responsibility to the self and to others.
2. Understand and follow changes in patterns of political behaviour, ideas and structures. Develop the ability to make logical inferences about social and political issues on the basis of comparative and historical knowledge.
3. Take individual and team responsibility, function effectively and respectively as an individual and a member or a leader of a team; and have the skills to work effectively in multi-disciplinary teams.
4. Know how to access and evaluate data from various sources of information

Course outcome:

SL No	Course Code	Title of the Course	Course Outcomes
1.	PSCMAJ101	Introduction to Political Science	After completion of the course, students will be able to: 1. Get familiar with the basic foundation of political science as an academic discipline. 2. Develop a solid understanding of concepts and methodologies in political science. 3. Apply critical thinking skills to analyze and evaluate political phenomena and processes. 4. Recognize and articulate the connections between politics and other disciplines. 5. Communicate effectively and present well-structured arguments on political science topics through oral and written means. 6. Engage in informed and constructive discussions on topics related to political science, respecting diverse perspectives and viewpoints.
2.	PSCMIN-101	Basic Concepts of Political Science	After completion of this course, students will be able to: 1. Have clear definitions and explanations of essential concepts in political science. 2. Develop a solid understanding of the subject matter. 3. Know how political theories contribute to our understanding of political systems and their functioning. 4. Explore the interconnectedness of various political concepts and their practical applications on real-world political issues and events.
3.	PSCIDC-101	Local Governance in India	An understanding of 73rd and 74th Amendments of the Constitution of India. An understanding of importance of local self-governance how its proper functioning can shape a greater social interest of local people. Understanding Prospects and Consequences of choosing right Local Representatives in grassroots politics. It will create more interest by learning both theoretically and practically as grassroots level governance is the closest to people.
4.	PSC-SEC101	Legislative Procedure	Students can understand practical knowledge of legislative procedures. Students can learn about drafting and passage of bills in India. The students will be able to learn about the functioning of parliament as well as various modes of question hours.
5.	PSCVAC-101	Values & Ethics -I	1. Students will gain knowledge about Bathouism, Vaishnavism, Buddhism& Jainism.

			<p>2. Students will learn the Philosophy of Bathou, Vaishnavism, Buddhism & Jainism.</p> <p>3. Students will learn ethical values through Kherai, BaatKanti, Vaishnavism, Buddhism & Jainism.</p>
6.	PSCMAJ-201	Constitutional Development of India	At the end of the course, the students will be able to understand how the acts and provisions initiated by British India contributed to the development of the Indian Constitution
7.	PSCMIN-201	Ideas of Democracy	<p>After completing this course students will be able to:</p> <p>Develop a broad historical, normative and empirical understanding of the idea and practice of democracy.</p> <p>Distinguish different models of democracy and their normative assumptions.</p> <p>Understand different theories of democracy and how different theories led to waves of democratization over history. • Examine current problems and understand how different democratic crises have emerged in practice.</p> <p>Apply democratic theories to critically assess political institutions and practices.</p> <p>Engage in dialogue about the meaning and value of democracy.</p> <p>Explain and defend how democratic theory might be used to respond to problems being faced by nation-states.</p>
8.	PSCIDC-201	Human Rights in India	<p>After completing this course students will be able to:</p> <p>Develop an efficient historical, normative as well as empirical understanding of the idea and practice of human rights.</p> <p>Distinguish among different approaches of human rights and develop an understanding about the usage of different approach to relevant situations.</p> <p>Develop a general idea about Indian Constitution and its role to defend human rights in India.</p> <p>Explore different institutions of human rights specifically in India.</p> <p>Engage in observation of violation of human rights in several sectors in India.</p> <p>Explain the necessity and develop an understanding about advocating the defence of human rights in contemporary</p>
9.	PSCSEC-201	Your Laws, Your Rights	<p>By the end of the course, students will be able to:</p> <ol style="list-style-type: none"> 1. Demonstrate knowledge of various legal systems and their impact on individual rights. 2. Analyze and evaluate constitutional law principles in relation to specific legal cases. 3. Apply critical thinking skills to examine and evaluate human rights issues. 4. Recognize and analyze the significance of civil liberties in a legal context. 5. Construct arguments and engage in debates on legal topics, supporting their perspectives with evidence and legal reasoning. 6. Understand the ethical considerations surrounding legal rights and responsibilities. 7. Communicate effectively in oral and written formats regarding
10.	PSCVAC 201	Values & Ethics in India-II	<ol style="list-style-type: none"> 1. Students will gain knowledge about Gurudev Kalicharan, Azan Faqir, Srimanta Sankardeva & Swami Vivekananda. 2. Students will know about the contribution of Gurudev Kalicharan, Azan Faqir, Srimanta Sankardeva & Swami Vivekananda towards the preservation of culture of indigenous people. 3. Students will learn about the Philosophy of Gurudev Kalicharan, Azan Faqir, Sankardeva & Swami Vivekananda
11.	PSCMAJ301	Political Theory	<p>After completion of the course, students will be able to:</p> <ol style="list-style-type: none"> 1. Demonstrate a comprehensive understanding of key political theories and concepts. 2. Analyze critically and evaluate political theories and arguments. 3. Apply political theory to contemporary issues and debates. 4. Engage in informed and articulate discussions on political theory. 5. Apply theoretical insights to practical world situations and contribute to constructive political discourse

12.	PSCMAJ302	Indian Government and Politics	This course enables students to develop an understanding of the basic features of the Indian constitution and institutional functioning as well as appreciate the approaches to the study of Indian politics and the changing nature of the state. It enables them to understand the working of different organs of government and the interaction among them which often involves both conflict and cooperation. Moreover, it enables the students to understand the division of powers in the Indian federal set-up and its asymmetrical federal arrangements
13.	PSCMIN -301	Nationalism in India	To introduce the colonial rule. To make students learn about the phases of Freedom Movement. To underline and examine the development of nationalism in India. Examine the changing phases of British Rule through Various Acts
14.	PSCIDC301	United Nations	Upon completion of the course, students will be able to: 1. Demonstrate a comprehensive understanding of the United Nations, its structure, and its key functions. 2. Analyse the historical development of the UN and its impact on global governance. 3. Evaluate the effectiveness of the UN in addressing global challenges and promoting international cooperation. 4. Apply critical thinking skills to analyse and propose solutions to current issues facing the UN. 5. Understand the principles and mechanisms of peacekeeping operations and conflict resolution. 6. Evaluate the role of the UN in promoting and protecting human rights globally.
15.	PSCSEC301	Capacity Building Skill	
16.	PSCMAJ 401	Ancient & Medieval Indian Political Thought	The students will be able to learn about traditional Indian society. They will be able to know the early Indian thinkers and its relevance in present times. They will be able to understand the social stratification of ancient India and the radical well as liberal ideologies of the thinkers.
17.	PSCMAJ402	International Relations	Students will be able to: 1. Understand key concepts and concerns in international relations including the way power is acquired and used globally and how states and non-states actors interact. 2. Become conversant in current international events through a close reading of the news and interpretation of events through international relations theories and concepts. 3. Become familiar with key concepts and theories of international relations to use as lenses to differently explain outcomes and events in world affairs.
18.	PSCMAJ403	Introduction to Public Administration	Students will be able to: - Offer definition of public administration - Identify ways that public and private organisations are similar and different. Explain the consequences of those differences for what government does and does not do. Discuss the tools that modern public administrators use to pursue public goals, along with pros and cons of those tools. Explain the major value that public administration has and illustrate how those affect the work of government.
19.	PSCMIN -401	Gender and Peace Studies	By the end of the course, students will be able to: 1. Demonstrate a comprehensive understanding of the key concepts and theories in gender studies and peacebuilding. 2. Analyze and critically evaluate the gendered dimensions of conflict and peace processes. 3. Assess the roles and contributions of women, men, and gender diverse individuals in peacebuilding efforts. 4. Critically examine policies and practices related to gender and peacebuilding. 5. Apply practical skills to promote gender equality in peacebuilding contexts.

Department of Botany

- As per the syllabus which covers up to Sem-IV in Bodoland University syllabus.

Programme Outcome:

PO1 -Develop a comprehensive understanding of botanical concepts and principles through research, leading to an enhanced knowledge base in the field of botany.

PO-2 Acquire advanced laboratory skills and research methodologies to investigate and, analyze plant specimens, contributing to scientific advancements in the field.

PO-3 Demonstrate critical thinking and problem-solving abilities by independently designing and executing botany research projects, resulting in the generation of new knowledge and insights.

PO-4 Communicate research findings effectively through written reports, presentations, and scientific publications, showcasing the ability to disseminate information to both academic and non-academic audiences.

Course outcome:

SL No	Course Code	Title of the Course	Course Outcomes
1.	BOTMAJ101-4	Microbes, Phycology, Mycology and Lichenology	a) Develop a comprehensive understanding of the diversity, ecological roles, and economic significance of microbes and lower cryptogams, and their applications in various fields. b) Acquire practical skills in laboratory techniques, critical analysis of scientific literature, and effective communication of research findings related to microbes and lower cryptogams. c) Understand the distribution, characteristic features and life cycles of microbes, algae and fungi. d) Know the economic importance of microbes, algae, fungi and lichens. e) Enhance collaborative learning and communication skills through practical sessions, teamwork, group discussions and home assignments. f) Inculcate scientific skills to study the specimens of microbes, algae, fungi, and lichens in laboratory.
2.	BOTMIN101-4	Biodiversity (Microbes, Algae, Fungi, Lichen and Archegoniate)	a) Identify and classify diverse microbial, algal, fungal, lichen, and archegoniate species, and understand their ecological roles and adaptations in different ecosystems. b) Analyse the evolutionary relationships and patterns of biodiversity among microbes, algae, fungi, lichen, and archegoniate, and assess their significance in ecosystem functioning and conservation efforts.
3.	BOTIDC 101-3	Agroforestry	a) Develop knowledge and skill in plantation of multipurpose trees and cash crops. b) Create sustainable deployment strategy by proper identification and planning of land and mix cropping for sustained yield.
4.	BOTSEC101-3	Mushroom Culture Technology	a) Develop proficiency in mushroom cultivation techniques, including spawn production, substrate preparation, and environmental control, resulting in the ability to independently establish and manage mushroom cultivation operations. b) Gain an understanding of post-harvest handling and quality control practices specific to mushroom cultivation, enabling participants to optimize harvest yields, maintain product quality, and extend shelf life for marketable mushrooms.
5.	BOTVAC101-4	Floriculture	The students will be able to understand the scope and importance of floriculture. They will expertise in Identification, Cultivation, and their propagation. Students will also be well versed in post-harvest management, marketing and value addition of commercial ornamental plants.
6.	BOTMAJ 102-4	Archegoniate	a) Demonstrate a comprehensive understanding of the diversity, classification, and characteristics of archegoniate, including bryophytes and pteridophytes, and their evolutionary significance in the plant kingdom.

			b) Apply knowledge of archegoniate morphology, life cycles, and ecological adaptations to analyse and interpret their ecological roles, distribution patterns, and contributions to ecosystem processes.
7.	BOTMIN102-4	Plant Ecology and Taxonomy	a) Gain a comprehensive understanding of plant ecology, including the interactions between plants and their abiotic and biotic environments, and the influence of ecological factors on plant distribution and community dynamics. b) Develop skills in plant identification, classification, and taxonomy, including the ability to use taxonomic keys and field guides to accurately identify plant species and understand their evolutionary relationships.
8.	BOTIDC 102-3	Medicinal Botany	a) Develop a comprehensive understanding of the identification, cultivation, and processing of medicinal plants, and their chemical constituents responsible for therapeutic properties, enabling the evaluation of their potential for drug development and healthcare applications. b) Explore the integration of traditional medicine practices, ethnobotany, and pharmacological principles in the study of medicinal plants, enabling the critical evaluation of their efficacy, safety, and cultural significance in different healthcare systems.
9.	BOTSEC102-3	Biofertilizer	a) Acquire knowledge and practical skills in the production, formulation, and application of biofertilizers, enabling participants to effectively utilize biofertilizers for improving soil fertility, nutrient availability, and plant growth in agricultural systems. b) Understand the ecological benefits and environmental impacts of biofertilizers, and evaluate their role in promoting sustainable agriculture practices, nutrient management, and reducing reliance on synthetic fertilizers, fostering a holistic approach towards soil health and crop productivity.
10.	BOTVAC102-4	Intellectual Property Rights	a) Develop a deep understanding of different forms of intellectual property rights (IPR), including patents, copyrights, trademarks, and trade secrets, and their legal frameworks, enabling participants to identify, protect, and manage intellectual property assets effectively. b) Acquire the skills to analyze and evaluate the commercial value and potential of intellectual property, including conducting patent searches, drafting patent applications, and understanding licensing and technology transfer agreements, facilitating informed decision-making and strategic management of intellectual property assets
11.	BOTMAJ201-4	Biomolecules and Cell Biology	a) The students will be able to learn the basics of biomolecules, bioenergetics, enzymes structural organization, components of cells, cell division and regulation. b) Knowledge on structure of enzymes. Students will able to learn about the cell, cell wall, plasma membrane and cell organelles.
12.	BOTMAJ202-4	Plant Taxonomy	a) Ability to understand basics of identification, classification and nomenclature, sources of taxonomic evidence, taxonomic structure, botanical nomenclature system and phylogeny and floral evolutions of angiosperm. b) Understand about the phylogeny of major orders of angiosperm.
13.	BOTMIN201-4	Biomolecules and Cell biology	a) The students will be able to learn the basics of biomolecules, bioenergetics, enzymes structural organization, components of cells, cell division and regulation. b) Ability to understand the types and significance of chemical bonds, nucleic acid, and different form of DNA .Knowledge on Cell, cell wall, plasma membrane, cell organelles, and cell division Knowledge on structure of enzyme and overview of membrane function etc.
14.	BOTIDC201-3	Natural Resource Management	a) Understand the natural resources and their sustainable utilization. b) Knowledge on land, water, energy, and forest resources. c) Students will learn about the practices of natural resource management. d) Knowledge on the international and national efforts of natural resource management.

15.	BOTSEC 201-3	Plant Identification & Herbarium Technique	<p>a) Developed understanding of different concepts, categories and approaches of plant classification.</p> <p>b) Identify the sources of taxonomic characters in different disciplines</p> <p>c) Interpret the rules of ICN in relevant aspects of botanical nomenclature.</p> <p>d) Explain different forms of taxonomic literature. • Learning the methods of plant identification of locally available plants</p>
16.	BOTMAJ203-4	Plant Ecology and Phytogeography	<p>a) This course will make students familiar the different levels of ecological studies, components of environment and its interactions, information on soil types and their properties, and an understanding about problem soils.</p> <p>b) It will enable students to develop skills in population dynamic studies to maintain stability. global ecological crisis, Sustainable development and pros and cons of human intervention.</p> <p>c) Enable the student to understand the structural and functional aspects of ecosystem and help them to design ecosystem models for sustainable development.</p> <p>d) Students will develop knowledge of different biomes scattered at different geographical regions and the principles governing them.</p>
17.	BOTMAJ204-4	Anatomy of Angiosperms	<p>a) Provide basic knowledge on the structural development of the plant body, tissue differentiation, secondary growths, adaptive and protective characters of different tissue and tissue systems in different types of plants.</p> <p>b) Understanding of the secondary growth in different plant bodies and its economic values.</p> <p>c) Application of plant anatomy in different fields besides.</p>
18.	BOTMAJ205-4	Genetics and Evolution	<p>a) Knowledge on fine structure of genes.</p> <p>b) Understanding of the phenomenon of inheritance along with deviations and sex determination.</p> <p>c) Knowledge of type, occurrence and mechanism of genomic alterations and their evolutionary significance.</p> <p>d) Understand the concept of origin of life, and comprehend evolution based on theories and evidences.</p>
19.	BOTMIN 202-4	Analytical techniques in Plant Science	<p>a) The students will be able to understand the working principles of biological tools and become expertise in applications of biological tools. Students will also be well versed in different plant analysis techniques.</p>
20.	BOTMAJ 301-4	Plant Physiology	<p>a) Gain a deep understanding of the fundamental physiological processes in plants, including photosynthesis, respiration, transpiration, and nutrient uptake, and their regulation.</p> <p>b) Develop the ability to analyze and interpret plant responses to environmental stimuli such as light, temperature, water availability, and stress, and comprehend the mechanisms involved.</p> <p>c) Acquire practical skills in conducting experiments and using various techniques to measure and analyze plant physiological parameters, enabling students to design and execute experiments in plant physiology research</p>
21.	BOTMAJ 302-4	Molecular Biology	<p>a) Develop a solid understanding of the fundamental principles and concepts of molecular biology, including DNA structure, replication, transcription, and translation.</p> <p>b) Gain knowledge and proficiency in various laboratory techniques used in molecular biology, such as DNA isolation, PCR, gel electrophoresis, and recombinant DNA technology.</p> <p>c) Analyze and interpret experimental data in molecular biology, including DNA sequences, gene expression patterns, and protein interactions, to draw meaningful conclusions and contribute to scientific research.</p> <p>d) Apply molecular biology principles to address real-world problems and challenges in fields such as biotechnology, genetics, medicine, and agriculture, and recognize the ethical considerations associated with molecular biology research and applications</p>

22	BOTMAJ 303-4	Microbiology and Plant Pathology	<p>a) Develop a comprehensive understanding of microorganisms, including bacteria, fungi, viruses, and their roles in plant diseases, and acquire the ability to identify and classify plant pathogens.</p> <p>b) Gain knowledge and skills in laboratory techniques used in microbiology and plant pathology, such as isolation and culturing of microorganisms, microscopy, and molecular diagnostics, enabling students to conduct accurate and reliable plant disease diagnosis.</p> <p>c) Apply the principles of plant pathology to effectively manage plant diseases, including the use of integrated pest management strategies, biocontrol agents, and sustainable disease management practices, contributing to the development of sustainable agriculture and plant health.</p>
23	BOTMAJ304-4	Analytical Techniques in Plant Sciences	<p>1. Develop a solid understanding of different analytical methods and instruments used in plant sciences, including spectroscopy, chromatography, microscopy, and molecular techniques, and gain proficiency in their application for the analysis of plant samples.</p> <p>2. Acquire practical skills in sample preparation, data collection, and data analysis using analytical techniques, enabling students to generate accurate and reliable results for plant-related research and practical applications.</p> <p>3. Apply critical thinking and problem-solving skills to evaluate and select appropriate analytical techniques for specific research questions in plant sciences, and effectively communicate scientific findings and conclusions using appropriate scientific terminology and presentation formats.</p>
24	BOTMIN301-4	Plant Anatomy and Embryology	<p>Develop a thorough understanding of plant anatomy, including the structure and organization of plant tissues and organs, and the ability to identify and describe anatomical features through microscopic examination.</p> <p>Gain knowledge and comprehension of plant embryology, including the processes of fertilization, embryogenesis, and seed development, and the ability to interpret and analyze developmental stages and patterns in different plant species.</p> <p>Acquire practical skills in laboratory techniques used in plant anatomy and embryology, such as tissue sectioning, staining, and microscopy, enabling students to conduct hands-on experiments and analyze plant structures and developmental processes.</p>
25	BOTMAJ 305-4	Reproductive Biology of Angiosperms	<p>Develop a comprehensive understanding of the reproductive structures and processes in angiosperms, including flower development, pollination mechanisms, and the formation of seeds and fruits.</p> <p>Gain knowledge and comprehension of the reproductive strategies and adaptations in angiosperms, such as breeding systems, floral morphology, and reproductive barriers, and their implications for plant evolution and diversity.</p> <p>Acquire practical skills in the identification and classification of floral structures, pollen grains, and reproductive organs, enabling students to analyze and interpret reproductive characteristics in different plant species.</p> <p>Apply the knowledge of reproductive biology in angiosperms to address real-world challenges related to plant breeding, crop production, and conservation, and recognize the importance of reproductive biology in understanding and preserving plant biodiversity</p>
26	BOTMAJ306-4	Plant Biotechnology	<p>1. Develop a solid understanding of the principles and concepts of plant biotechnology, including genetic engineering, tissue culture, and molecular breeding, and gain proficiency in the application of biotechnological techniques for plant improvement and crop production.</p> <p>2. Acquire practical skills in laboratory techniques used in plant biotechnology, such as DNA isolation, gene cloning, transformation, and tissue culture, enabling students to carry out molecular and cellular experiments for plant genetic manipulation.</p>

			3. Apply critical thinking and problem-solving skills to analyze and interpret data obtained from plant biotechnology experiments, and effectively communicate scientific findings and concepts related to plant biotechnology through oral presentations and written reports.
27	BOTMAJ 307-4	Bioinformatics	<p>Develop proficiency in utilizing bioinformatics tools and databases to retrieve, analyze, and interpret genomic, transcriptomic, and proteomic data relevant to plant biotechnology research.</p> <p>Acquire practical skills in data mining, sequence alignment, gene prediction, functional annotation, and phylogenetic analysis using bioinformatics software and algorithms, enabling students to extract meaningful information from plant genomic data.</p> <p>Apply bioinformatics approaches to study gene expression patterns, protein-protein interactions, and metabolic pathways in plants, and gain insights into the molecular mechanisms underlying plant growth, development, and stress responses.</p>
28	BOTMAJ 308-4	Economic Botany	<p>Develop a comprehensive understanding of the economic value and utilization of plant resources, including medicinal plants, food crops, timber, fiber, and ornamental plants, and recognize their significance in local and global economies. Acquire knowledge and skills to identify and classify economically important plant species, and understand their ecological requirements, cultivation techniques, and potential for sustainable utilization. Apply critical thinking and problem-solving skills to analyze and evaluate the impacts of human activities on plant resources, and develop strategies for the conservation, sustainable management, and utilization of plant biodiversity.</p>
29	BOTMIN 302-4	Plant Physiology and Metabolism	<p>1. Develop a deep understanding of the physiological processes in plants, including photosynthesis, respiration, water and nutrient uptake, and hormone signaling, and their regulation at the molecular and cellular levels.</p> <p>2. Acquire knowledge and skills to analyze and interpret plant responses to environmental factors such as light, temperature, water availability, and stress, and understand the mechanisms underlying plant adaptation and acclimation.</p> <p>3. Apply critical thinking and experimental skills to design and conduct plant physiology experiments, collect and analyze data, and effectively communicate scientific findings through oral presentations and written reports.</p>
30	BOTMAJ 401-4	Plant Metabolism	<p>1. Develop a thorough understanding of the biochemical processes and metabolic pathways involved in plant metabolism, including photosynthesis, respiration, carbohydrate metabolism, lipid metabolism, and secondary metabolite biosynthesis.</p> <p>2. Acquire knowledge and skills to analyze and interpret metabolic regulation and interactions in plants, and understand the physiological and ecological significance of plant metabolism in growth, development, and responses to environmental stimuli.</p> <p>3. Apply critical thinking and problem-solving skills to evaluate and design experiments related to plant metabolism, and effectively communicate scientific findings and concepts related to plant metabolic pathways and their functional implications.</p>
31	BOTMAJ 402-4	Plant breeding and Tissue Culture	<ul style="list-style-type: none"> • Develop a solid understanding of the principles and techniques of plant breeding, including selection, hybridization, and genetic manipulation, and apply these concepts to develop improved plant varieties with desired traits. • Acquire practical skills in tissue culture methods, including callus induction, somatic embryogenesis, and micropropagation, and apply these techniques for mass production of plants and clonal propagation. • Apply critical thinking and problem-solving skills to analyze and evaluate plant breeding strategies and tissue culture protocols, and make informed decisions in selecting appropriate techniques for specific breeding goals and conservation efforts.

32	BOTMAJ 403-4	Industrial Microbiology and Immunology	Develop a thorough understanding of the principles and applications of industrial microbiology, including microbial fermentation, biotechnology, enzyme production, and microbial control strategies in various industrial sectors. • Acquire knowledge and skills in immunological techniques, including serological assays, immunoassays, and molecular diagnostics, and apply them for disease diagnosis, vaccine development, and immunotherapy in industrial and clinical settings. • Apply critical thinking and problem-solving skills to analyze and evaluate industrial microbiology and immunology processes, and make informed decisions in selecting appropriate techniques and strategies for microbial product development, quality control, and disease prevention.
33	BOTREM 404-4	Research Methodology	• Develop the ability to design research studies, including formulating research questions, selecting appropriate research methods, and designing data collection instruments, ensuring the integrity and validity of research findings. • Acquire skills in data analysis, interpretation, and presentation, including the use of statistical techniques and software, enabling students to analyze research data effectively and communicate research findings in a clear and coherent manner.
34	BOTMIN 401-4	Bioresource Management	Understand the principles and concepts of bioresource management, including the sustainable use and conservation of biological resources. • Apply analytical and problem-solving skills to assess and manage bioresources in various contexts, considering ecological, economic, and social factors. • Demonstrate knowledge of different bioresource management strategies and techniques, such as biodiversity assessment, habitat restoration, and sustainable harvesting practices. • Evaluate the impacts of human activities on bioresources and develop strategies to mitigate negative effects and promote sustainable resource management
35	BOTMAJ 405-4	Environmental Biotechnology	The Significance in Environmental Biotechnology. • The fundamental principles, functions and application of industrial products like air, water, and soil pollution and waste in forensic Science. • The use of tools and techniques in identification and recognition in forensic Science. • The working of the Regulatory affairs in forensic Establishment in India.
36.	BOTMIN 402-4	Ethnobotany	Understand the cultural significance of plants and their traditional uses in different societies, including medicinal, culinary, ceremonial, and economic purposes. • Apply ethnobotanical research methods to document and analyze traditional knowledge related to plants, including indigenous practices, plant identification, and plant use patterns. • Evaluate the conservation and sustainability of plant resources, considering the impact of human activities, climate change, and cultural dynamics, and propose strategies for their protection and management
37.	BOTDIS 401-12	Dissertation	
38.	BOTADL 401-4	Biochemistry	Demonstrate a comprehensive understanding of the structure, properties, and functions of biomolecules, including proteins, carbohydrates, lipids, and nucleic acids, and their roles in cellular processes. • Apply biochemical techniques and laboratory skills to perform experiments, analyze data, and interpret results related to biochemical processes and enzyme kinetics. • Explain the principles of metabolic pathways, including energy metabolism, biosynthesis, and regulation, and their significance in cellular and organismal functions.
39.	BOTADL4 02-4	Advanced Plant Pathology	1. Acquire advanced knowledge of plant pathogens, including their classification, biology, and pathogenicity mechanisms, and apply this knowledge in the diagnosis and management of plant diseases. 2. Develop expertise in the use of advanced techniques and methodologies for the identification, characterization, and quantification of plant pathogens, as well as the assessment of host-pathogen interactions. 3. Demonstrate the ability to critically analyze scientific literature and research findings in the field of advanced plant pathology, and

			effectively communicate research outcomes through oral presentations and written reports.
40.	BOTADL 4 03-4	Plant Pharmacology and Pharmacognosy	Develop a deep understanding of the pharmacological properties of various plant compounds, including their mechanisms of action and potential therapeutic applications. • Acquire knowledge and skills in the identification, collection, processing, and quality assessment of medicinal plants, as well as the extraction and isolation of bioactive compounds. • Apply principles of pharmacognosy and pharmacological evaluation to assess the safety, efficacy, and quality of plant-based medicines, and critically analyze scientific literature in the field of plant pharmacology and pharmacognosy.

Department of Chemistry

- As per the syllabus which covers up to Sem-IV in Bodoland University syllabus.

Programme Outcome:

The expected outcome of the course is to equip students with the concepts, principles, theories and practical applications of Chemistry to facilitate the students in pursuing their higher studies in chemistry, to boost their career and employment options and to apply chemistry in their everyday life. The programme encourages the students towards logical thinking and also to think outside of the box so as to enable them to make correct decisions when encountered with different challenges in life.

Course outcome:

SL No	Course Code	Title of the Course	Course Outcomes
1.	CHMMAJ101-4	Fundamentals of Chemistry-1	On successful completion, the students would have clear understanding of the concepts related to atomic and molecular structure, chemical bonding, periodic properties. They will learn about basic organic chemistry and stereo-chemistry and states of matter gaseous, liquid and solid states along with ionic equilibria. The students will also be able to demonstrate about the molecular and crystal symmetry.
2.	CHMMAJ101-4	Inorganic Chemistry-1 LAB	
3.	CHMMIN101-4	Chemistry-1	On successful completion, students would have clear understanding of the atomic structure, basic organic chemistry and aliphatic hydrocarbons and basics of thermodynamics.
4.	CHMMIN101-4	Chemistry-1 LAB	
5.	CHMIDC101-3	Chemistry in Everyday Life-1	On successful completion, students would have basic ideas of chemistry involved in medicine, sweeteners, flavours, colours and preservatives in food science and different aspects of biomolecules.
6.	CHMSEC101-3	Basic Analytical Chemistry	Upon completion of this course, students shall be able to explain the basic principles of chemical analysis, design/implement microscale and semi-micro experiments, record, interpret and analyse data following scientific methodology.
7.	CHMMAJ102-4	Fundamentals of Chemistry-2	On successful completion, students would have clear understanding of the concepts related to Ionic and covalent bond. They will learn about the solid and liquid state of matter and aliphatic and aromatic hydrocarbons.
8.	CHMMAJ102-4	Organic Chemistry-1 LAB	

9.	CHMMIN102-4	Chemistry-2	On successful completion, students would have clear understanding of the concepts related to periodicity of elements, stereochemistry and kinetic theory of gases.
10.	CHMMIN201-4	Chemistry-2 LAB	
11.	CHMIDC102-3	Chemistry in Everyday Life-2	On successful completion, students would have basic ideas of Household materials, Polymers and rubbers, Chemicals used in Agriculture.
12.	CHMSEC102-3	Fuel Chemistry	At the end of this course students will learn about the classes of renewable and non-renewable energy sources. Students will learn about the composition of coal and crude petroleum, their classification, isolation of coal and petroleum products and their usage in various industries. They will also learn to determine industrially significant physical parameters for fuels and lubricants.
13.	CHMMAJ201-4	Inorganic Chemistry-1	On successful completion of this course, students would be able to identify the variety of s and p block compounds and comprehend their preparation, structure, bonding, properties and uses. They will also be able to apply the concept of acids and bases in inorganic applications. Students will also be equipped with noble gases and inorganic polymer. Experiments in this course will boost their quantitative estimation skills and precautions involved in titrations.
14.	CHMMAJ201-4	Inorganic Chemistry-1 LAB	
15.	CHMMAJ202-4	Physical Chemistry-1	In this course, the students will learn laws of thermodynamics, thermochemistry, thermodynamic functions, relations between thermodynamic properties, 22 Gibbs Helmholtz equation, Maxwell relations, etc. Moreover, the students are expected to learn ionic equilibria, the acidic and basic nature of the solution, pH measurement, buffer solution, their applications, and related numerical calculation. They will also learn about the quantitative estimation of solutions. Students are expected to gather experimental knowledge of properties of solutions like surface tension, viscosity, and pH-metry.
16.	CHMMAJ202-4	Physical Chemistry- 1LAB	
17.	CHMMIN201-4	Chemistry-3	On successful completion, students would have clear understanding of the chemical bonding of compounds, electrophilic aromatic substitution, properties of liquid and structure of solid. The students will also get idea of volumetric analysis.
18.	CHMMIN201-4	Chemistry-3 LAB	
19.	CHMIDC201-3	Chemistry in Everyday Life-3	On successful completion, students would have basic ideas of the chemicals responsible for environmental pollution, dos and dons for protection of environmental related issues. They will also have the basic idea of the importance and impact of metals on human health.
20.	CHMSEC201-3	Basic Instrumental Techniques in Chemistry	At the end of this course, students will learn about the different equipment's used in common chemistry laboratories. They will also be equipped with the knowledge of electronic equipment's used in chemistry for chemical analysis. The students will also learn about handling of sophisticated equipment's and software's used in chemistry.
21.	CHMMAJ203-4	Inorganic Chemistry-2	On successful completion, students will be able to gain the idea of general trends in the properties of transition elements in the periodic table and identify differences among the rows. The students will also learn about various aspects of metallurgy. Students will be able to name coordination compounds according to IUPAC, explain bonding in this class of compounds, understand their various properties in terms of CFSE and predict reactivity. Through the experiments, students not only will be able to estimate and prepare inorganic compounds but also will be able to design experiments independently which they would be able to apply if and when required

22	CHMMAJ203-4	Inorganic Chemistry-2 LAB	
23	CHMMAJ204-4	Organic Chemistry-1	The students are expected to learn preparation, properties and reactions of halogenated hydrocarbons, alcohols, phenols, ethers and epoxides, carbonyl compounds and carboxylic acids. They will also learn certain name reactions and reaction mechanisms. After attending this course, the students will be able to understand and demonstrate the concepts of organic chemistry and reactions of organic compounds. After studying the lab course of this paper, students will be able to detect of extra elements present in organic compounds, perform functional group test for nitro, amine and amide groups, and further, they will be able to perform qualitative analysis of unknown organic compounds containing simple functional groups (alcohols, carboxylic acids, phenols and carbonyl compounds).
24	CHMMAJ204-4	Organic Chemistry-1 LAB	
25	CHMMAJ205-4	Physical Chemistry-2	In this course, the students are expected to learn about chemical thermodynamics, conducting properties of solution, transference number, their determination, application of conductance measurement and conductometric titrations, and hydrolysis of salts. They will also learn about phase transition and phase equilibria, the derivation of various relations related to phase equilibria, and their applications. It is also expected that the students will learn about lab-based knowledge of thermochemistry.
26	CHMMAJ205-4,	Physical Chemistry-2 LAB	
27	CHMMIN202-4	Chemistry-4	On successful completion, students would have clear understanding of the properties of s- and p block elements present in periodic table, halogenated hydrocarbons and kinetics of reaction and catalysis. The students will get idea on the analysis of organic compounds.
28	CHMMIN202-4	Chemistry-4 LAB	
29	CHMINT201-2 (Internship)		

Department of Mathematics

- As per the syllabus which covers up to Sem-IV in Bodoland University syllabus.

Programme Outcome:

After the successful completion of this course, the student have the following abilities:

- An ability to analyze a problem, and identify and define the mathematical approaches required for its solution.
- An ability to function effectively in teams to accomplish a common goal. An ability to communicate effectively with a wide range of audiences.
- An ability to analyze the local and global impact of mathematics on individuals, organizations, and society. Recognition of the need for and an ability to engage in continuing professional development.
- An ability to use current techniques, skills, and tools necessary for mathematicians.
- An ability to apply mathematical ability, algorithmic principles, and mathematics in the modelling and design of mathematics-based computer systems in a way that demonstrates comprehension of the trade-offs

involved in design choices.

- e) An ability to apply mathematics and its principles in the construction of software systems of varying complexity.
- f) The mathematics UG students after the completion of the course will gain a thorough knowledge in preparing competitive examinations conducted by different organisations.
- g) The UG curriculum needs computer based courses which enable the students to solve computer oriented numerical problems.
- h) Abstract courses and mathematical structures included in the UG program enable the students to prepare themselves for higher education leading to M.Sc./MCA degree courses.

Programme Specific Outcomes:

After the successful completion of this course, the student will:

- a) Be able to explain the core ideas and the techniques of mathematics at the college level.
- b) Be able to recognize the power of abstraction and generalization, and to carry out investigative mathematical work with independent judgment.
- c) Be able to setup mathematical models of real world problems and obtain solutions in structured and analytical approaches with independent judgement.
- d) Be able to carry out objective analysis and prediction of quantitative information with independent judgment.
- e) Be able to communicate effectively about mathematics to both lay and expert audiences utilizing appropriate information and communication technology.
- f) Be able to work independently, and to collaborate effectively in team work and team building.
- g) Be able to conduct self-evaluation, and continuously enrich themselves through lifelong learning.
- h) Be able to communicate to lay audiences and arouse their interest in the beauty and precision of mathematical arguments and science.
- i) Be able to recognize the importance of compliance with the ethics of science and being a responsible citizen towards their community and a sustainable environment.
- j) Be able to cultivate a mathematical attitude and nurture the interests.
- k) Students will be able to understand and view mathematical structures.
- l) Students will learn numerical aptitude applying both qualitative and quantitative knowledge for their future career.

Course outcome:

SL No	Course Code	Title of the Course	Course Outcomes
1.	MATMAJ101-4	Foundation of Mathematics	This course will enable the students to: a) Identify different types of functions and relations with their applications. b) Determine the number of positive/negative real roots of a real polynomial. c) To learn the modular arithmetic and their applications. d) To learn the systems of linear equations and their applications. e) To learn the use of Mathematica Software in solving system of linear equations
2.	MATMIN101-4	Foundation of Mathematics	This course will enable the students to: a) Get the basic idea of Complex Numbers, Matrices and Theory of Equations. b) Utilize the knowledge of Complex Numbers, Matrix and Theory of Equations to understand. c) Learn to solve Complex Numbers, matrices and the Theory of Equations
3.	MATIDC101-3	Commercial Arithmetic-I	This course will enable the students to: a) Evaluate the legal, social and economic environment of business. b) Apply decision support tools to business decision making. c) Will be able to apply knowledge of business concepts and functions in an integrated manner

4.	MATSEC101-3	HTML and Web Designing	This course will enable the students to: a) Able to create and publish a basic website using HTML. b) Able to use common web design principles and techniques. c) Differentiate between effective and ineffective visual communication. d) Create visually appealing and effective presentations using PowerPoint.
5.	MATMAJ102-4	Calculus	This course will enable the students to: a) To learn the technique of finding nth derivative of some standard functions. b) Identify and apply the intermediate value theorem. c) Learn the centre of curvature, asymptotes of the given curve. d) Learn to evaluate integrals, find arc -lengths, areas and volume.
6.	MATMIN102-4	Integral Calculus and Differential Equations	This course will enable the students to: a) Get the basic idea of integration and reduction formulae. b) Utilize the knowledge of integration by parts for definite integral. c) Learn various methods for solving differential equations and partial differential equations.
7.	MATIDC102-3	Commercial Arithmetic-II	This course will enable the students to: a) Integrate the concept of basic mathematics for business. b) To learn different techniques of simplification of the real number system. c) To enable students to answer competitive examinations. d) To apply knowledge of business concepts and functions in an integrated manner.
8.	MATSEC102-3	Programming in C	This course will enable the students to: a) Understand and learn data-types, Library functions of C. b) Used the programming concepts of C to mathematical investigation and problem solving. c) Learn about applications in factorization of an integer, Cartesian geometry and uses understanding in various applications in algebra.\n d) In practical students learn about the roots of a quadratic equation, solution of $\sin(x)$, $\cos(x)$ with the help of functions
9.	MATMAJ201-4	Elements of Real Analysis	This course will enable the students to: a) To learn in-depth about the suprema and infima of real numbers and their applications. b) To learn about the convergence and the divergence of real sequences and their series
10.	MATMAJ202-4	Differential Equations (ODE)	This course will enable the students to: a) Learn basics of differential equations and mathematical modeling. b) Formulate differential equations for various mathematical models. c) Solve first order linear and non-linear differential equations and linear differential equations of higher order using various techniques. d) Apply these techniques to solve and analyze various mathematical models
11.	MATMIN201-4	Analytical Geometry	This course will enable the students to: a) Learn concepts in two-dimensional geometry. b) Identify and sketch conics namely, ellipse, parabola and hyperbola. c) Learn about three-dimensional objects such as straight lines and planes using vectors, spheres, cones and cylinders
12.	MATIDC201-3	Logic and Graphical Representation of Data	This course will enable the students to: a) Understand about logics in mathematics. b) Understand to analyze data graphically
13.	MATSEC201-3	Sci Lab	This course will enable the students to: a) Get the basic idea of Sci lab and how to install it. b) Learn to write equations, matrix and tables. c) Implement simple mathematical equations in numerical computing environment. d) Draw 2D and 3D graphs and export it.
14.	MATMAJ203-4	Group Theory	This course will enable the students to: a) Understand groups and classify them as abelian, cyclic and permutation groups.

			b) Explain the significance of the notion of cosets, normal subgroups and homomorphism of groups.
15.	MATMAJ204-4	Numerical Methods	This course will enable the students to: a) Learn some numerical methods to find the zeroes of nonlinear functions of a single variable and solution of a system of linear equations, up to a certain given level of precision. b) Know about methods to solve system of linear equations, such as Gaussian Elimination and Gauss Jordan methods, LU decomposition method, Gauss Jacobi method, Gauss Seidel method. c) Compute the values for a tabulated function at points not in the table using interpolation techniques. d) Know about applications of numerical differentiation and integration to convert differential equations into difference equations for numerical solutions.
16.	MATMAJ205-4	Analytical Geometry (2D) and Vector Algebra	This course will enable the students to: a) This course will enhance the understanding of mathematical concepts with geometrical/graphical interpretations. b) After studying this course student will be able to visualize mathematical concepts geometrically. c) Further, the course will enable students to know about the practical applicability of the concept of vectors to explain and analyze physical situations. d) Students will acquire basic knowledge and background to understand other courses either in mathematics or physics from this course.
17.	MATMIN202-4	Vector Calculus	This course will enable the students to: a) Understand the scalar and vector triple products. b) Understand the calculus of vector functions and their uses to develop the basic principles of planetary motion.

Department of Physics

- As per the syllabus which covers up to Sem-IV in Bodoland University syllabus.

Programme Outcome:

- 1) After completion of program, students have deep knowledge of basic concepts in Physics.
- 2) Students are expected to acquire core knowledge in Physics, including the major premises of Mechanics and Properties of matter, Modern Physics, Classical and Quantum mechanics, Electricity and Magnetism, Digital Electronics, Optics, Relativity, Heat and Thermodynamic, Solid State Physics, Mathematical and Statistical physics, Atomic, Molecular and Nuclear Physics, Laser and nonconventional energy sources.
- 3) Students are also expected to develop written and oral communication skills in communicating physics-related topics.
- 4) Students should learn how to design and conduct an experiment and understand the basic physics behind it.
- 5) Students will develop the proficiency in the handling of laboratory instruments.
- 6) Students will realize and develop an understanding of the impact of Physics on society and apply conceptual understanding of the physics in real life.
- 7) Students develop aptitude of doing research through undertaking small projects and research centre visit.
- 8) Students can develop interdisciplinary approach.

Program Specific Outcomes:

- 1) The syllabi are framed in such a way that it bridges the gap between the plus two and post graduate levels of Physics by providing a more complete and logical framework in almost all areas of basic Physics.
- 2) By the end of the first year (2nd semester), the students should have attained a common level in basic mechanics, Optics, Heat and Thermodynamics and Electricity and Magnetism. They were developed their experimental and data analysis skills through experiments at laboratories.

3) By the end of the second year (4th semester), the students should have been introduced to powerful tools for tackling a wide range of topics in, Modern Physics, General Electronics, Mathematical and Statistical Physics and Solid State Physics They develop their experimental and data analysis skills through a wide range of experiments through practical at laboratories.

4) By the end of the third year (6th semester), the students should have developed their understanding of core Physics by covering a range of topics in almost all areas of physics including Classical and Quantum Mechanics, Electrodynamics, Laser, Fiber optics, semiconductor devices and Non-conventional Energy Sources.

5) They had experience of independent work such as projects; seminars etc. The experimental skills were developed through a series of experiments. Students will design and conduct an experiments and processes. Students will demonstrate an understanding of the impact of physics on Society.

Course outcome:

SL No	Course Code	Title of the Course	Course Outcomes
1.	PHYMAJ101-4	Mechanics	On successful completion of the course students will be able to understand about the fundamental concept of dynamics, work and energy, Elasticity, motion under central force, waves & oscillations & special theory of relativity.
2.	PHYMAJ101-4	Mechanics Lab	
3.	PHYMIN101-4	Mechanics	Upon completion of this course, students will be able to: a) Learn basics vector, vector algebra, and its Product. b) Learn 1st and 2nd order differential equations. c) Understand the concepts of laws of motion and their application to various dynamical situations. And their applications to the conservation of momentum, angular momentum, and energy. d) Understand rotational motion and associated parameters. e) Apply Kepler's laws to describe the motion of planets and satellites in a circular orbit. f) The concept of geosynchronous orbits. g) Understand Simple Harmonic Motion and energy associated with SHM. h) Learn mechanical properties of matter and elastic constants. i) Concept of stress and strain and the relation between elastic constants. j) Understand Einstein's postulates of special relativity. k) Apply Lorentz transformations to describe simultaneity, time dilation, and length contraction
4.	PHYMIN101-4B	Mechanics Lab	
5.	PHYIDC101-3	Basics of Physical Bodies	a) Students are expected to learn the basic physics. b) They are also expected to get the holistic scientific reason for different geophysical phenomena. c) Also it is expected that they will be interested to learn the contribution of ISRO has made so far for building India as a self reliant nation in Space research.
6.	PHYSEC101-3	Instrumentation Skills in Physics-I	a) Students will gain theoretical and hands-on experience on the important electronic measurements and will learn about basic circuit analysis, electronic components, multimeters, oscilloscopes, and sensors etc.
7.	PHYSEC101-3	Instrumentation Skills in Physics-I Lab	
8.	PHYMAJ102-4	Mathematical Physics - I	a) This part of the course includes mathematics so that students could understand Calculus, Vectors & their applications in various fields of physics, Differential Equation & its application, different coordinate systems & concept of probability & error. This will be helpful to students for their higher studies.
9.	PHYMAJ102-4	Mathematical Physics - I Lab	The aim of this Lab is not just to teach computer programming and numerical analysis but to emphasize its role in solving problems in Physics:

			<p>a) Highlights the use of computational methods to solve physical problems.</p> <p>b) The course will consist of lectures (both theory and practical) in the Lab.</p> <p>c) Evaluation done not on the programming but on the basis of formulating the problem.</p> <p>d) Aim at teaching students to construct the computational problem to be solved Students can use any one operating system Linux or Microsoft Windows</p>
10.	PHYMIN102-4	Electricity, Magnetism and Electromagnetic Theory	<p>At the end of this course, students will be able to:</p> <p>a) Enhance the idea of vector operation further.</p> <p>b) Understand the concept of electric field and electric flux.</p> <p>c) Learn to apply Gauss's theorem to find electric fields for different types of charge distribution.</p> <p>d) Will develop the concept of capacitors and How to calculate the capacity of various types of capacitors.</p> <p>e) Learn about magnetism due to current.</p> <p>f) Will grasp the idea of Magnetic materials and their properties.</p> <p>g) Understand the core concept of electromagnetic induction and Propagation of electromagnetic waves.</p>
11.	PHYMIN102-4B	Electricity, Magnetism and Electromagnetic Theory LAB	
12.	PHYIDC102-3	Electricity, Magnetism and Electronics	<p>a) After successful completion of this paper students of other discipline will be able to comprehend the basics of electric current and magnetism.</p> <p>b) They will have the idea of electron flow in conductor, semiconductor.</p> <p>c) The students will also be able to gain ideas of working of Radio, television and some microelectronic devices.</p>
13.	PHYSEC102-3	Instrumentation Skills in Physics-II	<p>a) Students will be able to learn about the fundamental concepts of geometrical and physical optics, light sources, detectors, and fiber optic sensors.</p> <p>b) After completion of this course, students will also be able to comprehend the practical skills in setting up optical experiments, collecting and analysing data, and interpreting experimental results.</p>
14.	PHYMAJ201-4	Electricity and Magnetism	<p>a) After completion of this paper students will be able to understand the electric & magnetic fields & their application ,Electromagnetic induction, applications of Kirchoff's laws in electrical circuits.</p>
15.	PHYMAJ201-4	Electricity and Magnetism Lab	
16.	PHYMAJ202-4	Waves and Optics	<p>a) The outcome of the paper includes the knowledge of vibrations, propagation of waves , vibration of air column, harmonics of strings.</p> <p>b) The paper has another outcome of offering knowledge of wave properties of light & corresponding phenomena.</p>
17.	PHYMAJ202-4	Waves and Optics Lab	
18.	PHYMIN201-4	Thermal Physics and Statistical Mechanics	<p>Upon completion of this course, students will be able:</p> <p>a) To grasp the idea of 1st law of thermodynamics and its applications.</p> <p>b) To learn different laws of thermodynamics and their significance.</p> <p>c) To understand Maxwell's relations, Joule-thompson effect and Caussius-Clapeyron equation.</p> <p>d) To learn the derivation of Maxwell's Law of distribution of velocities, Various Transport phenomena, and also the application of the law of equipartition of energy.</p> <p>e) To understand Blackbody radiation and its Spectral distribution.</p> <p>f) To learn to derive Plank's law and also derivation other laws like Wien's distribution law, Rayleigh-Jeans law,etc from Plank's Law.</p> <p>g) To understand the basics of Statistical mechanics and the significance and applications of various types of statics.</p>
19.	PHYMIN201-4	Thermal Physics and Statistical Mechanics Lab	

20.	PHYIDC201-3	Molecules, Photons and Nuclei	<p>a) Students are expected to understand the concept of energy and its conservation and different forms.</p> <p>b) They will also be able to understand the theory of relativity and the equivalence of mass and energy; the electromagnetic radiation, Solar energy and the thermonuclear reactions that are going on in the Star.</p> <p>c) They will also understand the Expansion of the Universe, the origin of cosmic rays etc.</p>
21.	PHYSEC201-3	Electrical Network and Loads	<p>a) Students will be able to gain the skills necessary to analyze and design electrical networks, select appropriate loads, and understand the interplay between electrical systems and loads in various applications. b) Students will also acquire fundamental professional skills related to electrical wiring, splicing techniques, and shunting methods.</p>
22.	PHYSEC201-3	Electrical Network and Loads Lab	
23.	PHYMAJ203-4	Mathematical Physics - II	<p>After successful completion of this course, students will be able to:</p> <p>a) Expand functions in terms of Fourier series.</p> <p>b) Solve second order ordinary differential equations using Frobenius method.</p> <p>c) Find the solutions of Legendre, Bessel, Hermite and Laguerre Differential Equations and their application in various problems related to physics.</p> <p>d) Solve partial differential equations like Laplace's equation in various co-ordinate systems using separation of variables method.</p> <p>e) Explain the properties of Beta and Gamma Functions and express integrals in terms of them.</p>
24.	PHYMAJ203-4	Mathematical Physics – II Lab	<p>a) The aim of this Lab is to use the computational methods to solve physical problems. Course will consist of lectures (both theory and practical) in the Lab. Evaluation done not on the programming but on the basis of formulating the problem</p>
25.	PHYMAJ204-4	Thermal and Statistical Physics	<p>a) After successful completion of this course students are able to understand about the first and second laws of Thermodynamics, how heat, energy and work are related , about Isothermal and adiabatic processes about specific heat. about Heat engine and its efficiency, Concept of Entropy and the change of Entropy for different thermodynamic processes .</p> <p>b) From Maxwell's Thermodynamics student will be able to learn about the distribution of classical particles , for Ideal and real gas and the Maxwell equation in thermodynamics are set of relations which is used in deriving the dependence of thermodynamic variables as the state variables of P,V and T.</p> <p>c) After study of Classical theory of radiation , students will learn about the time angular distribution of the radiation of energy and momentum connecting various laws like ,Kirchhoff's law , StefanBoltzmann's law, Rayleigh-Jean's law etc.</p>
26.	PHYMAJ204-4	Thermal and Statistical Physics Lab	
27.	PHYMAJ205-4	Analog Systems and Applications (Electronics -I)	<p>a) After successful completion of this course students will learn about Semiconductor and their types P and N. About PN junction Diode , their characteristic.</p> <p>b) Application of Diode as rectifier, stabilized power supply, different types of diode, LED, Photodiode etc.</p> <p>c) Students will learn about PNP and NPN transistors, their characteristics and their application as an Amplifier.</p> <p>d) In this course students learn about different types of amplifiers RC-Coupled amplifiers and their frequency response, Feedback-amplifier-positive and negative type, Operational amplifier and their applications like, Adder, Subtractor, Differentiator ,Integrator. This course also gives fear knowledge about Oscillators.</p>
28.	PHYMAJ205-4	Analog systems and applications	

		(Electronics -I) Lab	
29.	PHYMIN202-4	Waves and Optics	After the completion of this course, the students shall be able to learn the following- a) The concept of superposition of waves and phenomena thus originated. b) Learn waves traveling through different mediums and parameters involved. c) Simple harmonic motion, superposition principle, and its application to find the resultant of superposition of harmonic oscillations. d) Concepts of vibrations in strings. e) Interference phenomenon arose out of the superposition of waves from coherent sources. f) Basic concepts of Diffraction: Fraunhofer and Fresnel Diffraction. g) Elementary concepts of the polarization of light. h) Michelson's Interferometer and its Applications
30.	PHYMIN202-4	Waves and Optics Lab	

Department of Zoology

Programme Outcome:

PO 1: This will improve both the fundamental theoretical understanding and practical knowledge of Zoology.

PO 2: This will assist students in developing the foundational concepts necessary for future projects and advanced studies.

PO 3: It will promote an understanding of the evolutionary foundations of diverse animal species and their development, while also addressing the current state of animal diversity.

PO 4: It will enable students to comprehend the principles related to different applied sciences.

PO 5 It will contribute to the conservation of wild animals and enhance the economic value of the zoological content present in the environment.

PO 6 All the above POs will lead to a mind that can develop modern technologies to address the problems and to give solution to it.

Course outcome:

SL No	Course Code	Title of the Course	Course Outcomes
1.	ZOOMAJ101-4	Cell Biology and Histology	Upon completion of the course, students will have acquired sufficient knowledge on the fundamental structure, function, and biochemistry of the cell.
2.	ZOOMIN101-4	Cell and Molecular Biology	Upon completion of the course, students will have acquired sufficient knowledge on the fundamental structure, function, and biochemistry of the cell.
3.	ZOOIDC101-3	Environmental Studies and Wildlife Conservation	The outcome of such studies is to foster a sense of responsibility and encourage sustainable practices for the preservation and conservation of the environment. This knowledge can help in formulating policies and strategies to mitigate the damage caused by human activities and work towards achieving a more harmonious relationship between man and nature.
4.	ZOOSER101-3	Non-Mulberry Sericulture	They will also have knowledge of the life cycles of Eri and Muga silkworms, the structure of silk glands, and the characteristics of silk. Additionally, readers will be informed about the food plants suitable for Eri and Muga silkworm rearing. Overall, this section will lay a strong foundation for understanding the subsequent topics related to sericulture.

5.	ZOOVAC101-4	Basic Ecotourism	<p>a) Students will understand the concepts of tourism demand and supply and will be able to identify the unique features of the tourism industry.</p> <p>b) Overall, this course will equip students with a solid foundation in tourism studies, enabling them to analyze and understand the various aspects and impacts of the industry.</p>
6.	ZOO MAJ 101-4	Biological Techniques	<p>a) After completing the objectives related to Prokaryotic and Eukaryotic cells, Virus, Viroids, Mycoplasma, Prions, Various models of plasma membrane structure, Active and Passive transport, Facilitated transport, Cell junctions, Structure and Function of different cell components, Cell Division, and Cell Signaling, students will be able to demonstrate a comprehensive understanding of the structure, function, and processes involved in cellular biology.</p> <p>b) Upon achieving the objectives related to Histology and Bio-instrumentation, students will acquire the ability to apply principles and techniques of microscopy, histological staining, and diagnostic methods for blood and urine analysis. They will also develop skills in utilizing various bio-instrumentation tools and methods for research, analysis, and diagnostic purposes in the field of biology</p>
7.	ZOOMIN102-4	Biostatistics and Bioinstrumentation	<p>a) By the end of this course, students will have a solid understanding of the principles and concepts of biostatistics. They will be able to utilize appropriate terminology, symbols, and statistical methods to analyze and interpret biological data.</p> <p>b) Additionally, students will gain practical knowledge of laboratory techniques such as microscopy, centrifugation, spectrophotometry, various chromatography techniques, electrophoresis, and PCR. Overall, this course will equip students with the necessary statistical and laboratory skills to conduct and analyze biological research effectively.</p>
8.	ZOOIDC102-3	Basic Lab safety & Techniques	<p>a) Understand the importance of laboratory safety and the consequences of inadequate safety practices.</p> <p>b) Recognize their roles and responsibilities as laboratory personnel in maintaining a safe working environment. Identify and assess common laboratory hazards, including chemical, biological, and physical hazards.</p>
9.	ZOOSEC102-3	Aquaculture	<p>a) Understand the historical development and current state of aquaculture.</p> <p>b) Identify and describe important aquaculture species.</p> <p>c) Apply principles and criteria for site and species selection in aquaculture.</p>
10.	ZOOVAC102-4	Vermicompost Technology	<p>a) Recognize the economic importance of vermiculture in various sectors.</p> <p>b) Appreciate the value of vermiculture in maintaining soil structure and fertility.</p> <p>c) Comprehend the role of vermiculture in the four R's of recycling: reduce, reuse, recycle, and restore.</p> <p>d) Understand the bio-transformation process of residues generated by human activities through vermiculture.</p>
11.	ZOO MAJ 201-4	Basics of Biochemistry	<p>a) After completing the objectives, the students will understand the structure, classification, and biological significance of carbohydrates, including monosaccharides, disaccharides, polysaccharides, and glycoconjugates, as well as the structure and importance of lipids, such as saturated and unsaturated fatty acids, triacylglycerols, phospholipids, glycolipids, and steroids.</p> <p>b) Besides, they will know about the structure and classification of amino acids, including amino acids, and their physiological importance, along with the bonds stabilizing protein structure, levels of organization in proteins, denaturation, introduction to simple and conjugate proteins, as well as the structure of nucleic acids, including purines, pyrimidines, nucleosides, nucleotides, and nucleic acids.</p>

			c) Additionally, to understand the nomenclature, classification, specificity, mechanism, kinetics, and regulation of enzyme action as biological catalysts.
12.	ZOO MAJ 202-4	Principles of Ecology and Animal Behaviour	a) The course aims to provide students with a basic understanding of ecosystems and their services to mankind. b) They will learn about the interrelationships between living organisms and their environment, and how ecosystems contribute to human well-being.
13.	ZOOMIN201-4	Evolutionary Biology and Genetics	a) The outcome of studying these topics is to equip individuals with a solid foundation in evolutionary biology, genetics, and inheritance, enabling them to apply this knowledge to various fields such as medicine, agriculture, and conservation. b) Individuals will develop critical thinking and analytical skills necessary for evaluating scientific evidence and conducting further research in these areas.
14.	ZOO IDC 201-3	Human Wildlife Conflict and Management	a) The course provides students with a comprehensive understanding of the evolution of wildlife management, the importance of conservation efforts, the significance of protected areas, and the socio-economic aspects of conflicts and coexistence between humans and wildlife. b) Students will develop critical thinking skills and gain insights into the complexities of wildlife conservation and sustainable development.
15.	ZOO SEC 201-3	Animal Husbandry and Livestock Management	a) Demonstrate proficiency in housing management, providing appropriate facilities for the comfort, health, and productivity of dairy cattle. b) Understand the principles and practices of meat production, abattoir management, and processing of meat and milk products. c) Comprehend the importance of animal welfare and apply relevant guidelines to ensure the ethical treatment of dairy cattle.
16.	ZOO MAJ 203-4	Physiology: life sustaining systems	a) Students will be gaining knowledge on important life sustaining systems. b) Students will have detail knowledge on important processes of animal body. c) Students will have laboratory-oriented knowledge for handling some of important physiological & biochemical tests.
17.	ZOO MAJ 204-4	Principles of Genetics	a) Demonstrate a comprehensive understanding of the principles of inheritance and the various extensions of Mendelian genetics, including incomplete dominance, co-dominance, multiple alleles, lethal alleles, epistasis, pleiotropy, sex-linked inheritance, linkage, crossing over, chromosomal mapping, mutations, sex determination, extra-chromosomal inheritance, polygenic inheritance, recombination in bacteria and viruses, and transposable genetic elements. b) Apply their knowledge to analyze and interpret complex genetic phenomena, enabling them to explain patterns of inheritance, predict outcomes of genetic crosses, and understand the molecular basis of genetic mutations. c) Develop critical thinking and problem-solving skills in the field of genetics, allowing them to approach genetic research and practical applications with a solid foundation of knowledge and analytical abilities.
18.	ZOO MAJ 205-4	Animal Biotechnology	a) Students will have a concept and aids of technology on biological study. b) They will learn culture techniques and their application.

19.	ZOO MIN 202-4	Physiology and Biochemistry	<p>a) Students will be gaining knowledge on important life sustaining systems.</p> <p>b) Students will have detail knowledge on important processes of animal body.</p> <p>c) Students will have laboratory-oriented knowledge for handling some of important physiological & biochemical tests.</p>
20.	ZOO MAJ 301-4	Basic Systematics and Diversity of Life-I (Non-Chordates)	<p>a) By the end of the course, students will have acquired a strong foundation in animal taxonomy, enabling them to understand and apply systematic principles, perform taxonomic procedures, and classify various organisms accurately.</p> <p>b) They will also gain insight into the diversity of life and the evolutionary significance of different animal groups.</p>
21.	ZOO MAJ 302-4	Developmental Biology	<p>a) Students will be able to acquire knowledge on embryonic development of sexually reproducing animals.</p> <p>b) They also obtain knowledge on metamorphic changes and the role of placenta in mammals.</p>
22.	ZOO MAJ 303-4	Organic Evolution	<p>a) Students will be able to acquire knowledge on origin of life</p> <p>b) They also obtain knowledge micro-evolutionary of the life forms on earth. Course</p>
23.	ZOOMAJ304-4	Biochemistry of Metabolic Processes	<p>a) Students will have acquired a comprehensive understanding of the fundamental principles and processes involved in metabolism.</p> <p>b) They will be able to explain and analyze the various metabolic pathways, their regulation, and the interconnections between different metabolic processes.</p> <p>c) Students will also develop the ability to apply this knowledge to understand the metabolic basis of various physiological and pathological conditions.</p>
24.	ZOOMIN 301-4	Taxonomy and Diversity of life-I (Non-chordates)	<p>a) By the end of the course, students will have acquired a strong foundation in animal taxonomy, enabling them to understand and apply systematic principles, perform taxonomic procedures, and classify various organisms accurately.</p> <p>b) They will also gain insight into the diversity of life and the evolutionary significance of different animal groups.</p>
25.	ZOO MAJ 305-4	Diversity of Life-II (Chordates)	<p>a) By the end of the course, students will have acquired a strong foundation in animal taxonomy, enabling them to understand and apply systematic principles, perform taxonomic procedures, and classify various organisms accurately.</p> <p>b) They will also gain insight into the diversity of life and the evolutionary significance of different animal groups</p>
26.	ZOO MAJ 306-4	Comparative Anatomy of Vertebrates	<p>a) Students will be gaining knowledge on development and modifications of important anatomical structures in vertebrates.</p> <p>b) Students will have detail knowledge body organization in terms of different tissues.</p> <p>c) Students will have laboratory-oriented knowledge to study microscopic structure of tissues and cells.</p>
27.	ZOO MAJ 307-4	Molecular Biology	<p>a) By the end of the course, students will have acquired a comprehensive understanding of the history, development, and scope of genetics.</p> <p>b) They will be able to explain the nature of genetic material, including DNA and RNA, understand the processes of DNA replication, transcription, and translation, and comprehend the concepts of gene expression and gene regulation.</p> <p>c) Students will also gain knowledge about the genetic code, its deciphering, and the contributions of key scientists in the field of genetics.</p>

28.	ZOO MAJ 308-4	Biostatistics & Bioinformatics	<p>a) By the end of the course, students will have acquired a solid understanding of genetics, enabling them to analyze genetic patterns, interpret pedigrees, and understand the molecular basis of inheritance.</p> <p>b) They will be able to apply their knowledge to real-world situations and make informed decisions regarding genetic testing, genetic engineering, and ethical considerations in genetics.</p>
29.	ZOOMIN 302-4	Diversity of life-II (Chordates)	<p>a) To learn the general characteristics and classification of different classes of vertebrates.</p> <p>b) To understand the vertebrate evolutionary tree.</p> <p>c) To understand general aspects of applied interest in relation to vertebrates.</p>
30.	ZOO ADL 401-4	Gene and Genomics	<p>a) By the end of the course, students will have acquired a thorough understanding of the structure and organization of the genome, as well as the processes of DNA replication, recombination, repair, transcription, post-transcriptional processing, translation, and protein transport.</p> <p>b) They will be able to analyze and interpret the mechanisms involved in these processes and understand their significance in gene expression and cellular functions</p>
31.	ZOO ADL 402-4	Immunology	<p>a) By the end of the course, students will have acquired a thorough understanding of the immune system, its components, and their functions.</p> <p>b) They will be able to explain the principles of innate and adaptive immunity, antigen-antibody interactions, and the roles of immunoglobulins, cytokines, and complement in immune responses.</p> <p>c) Students will also gain knowledge about hypersensitivity reactions, major histocompatibility complex (MHC), and the different types of vaccines.</p> <p>d) They will be equipped with the ability to apply their knowledge to analyze and interpret immunological processes and their significance in disease prevention, diagnosis, and therapeutics.</p>
32.	ZOO ADL 403-4	Endocrinology	<p>a) By the end of the course, students will have acquired a comprehensive understanding of endocrinology, including the history, classification, characteristic features, and transport of hormones.</p>
33.	ZOO ADL 404-4	Nutrition and Health	<p>a) Students will be equipped with knowledge and skills to make informed decisions about their own nutrition and contribute to the well-being of others through appropriate nutritional care and support</p>
34.	ZOO REM 404-4	Research Methodology	<p>a) Individuals will develop the ability to critically evaluate scientific literature, communicate research results through various scientific writing formats, and adhere to ethical guidelines and standards in scientific publishing.</p> <p>b) This knowledge and skillset will contribute to the advancement of scientific knowledge, promote intellectual honesty, and foster a culture of integrity in scientific research.</p>
35.	ZOOMIN 401-4	Ecology & Environment	<p>a) The outcome of studying Introduction to Ecology is to develop a foundational understanding of ecological principles and processes.</p> <p>b) This knowledge can be applied to various aspects of ecological research, conservation efforts, and environmental management.</p>
36.	ZOO ADL 405-4	Applied Zoology	<p>a) Understand the culture techniques of prawn, pearl and fish.</p> <p>b) Understand silkworms rearing and their products.</p> <p>c) Understand the Bee keeping equipment's and apiary management.</p> <p>d) Understand dairy animals' management, the breeds and diseases of goats and learn the testing of egg and milk quality.</p> <p>e) Learn various concepts of lac cultivation.</p> <p>f) Be aware of a broad array of career options and activities in human medicine, biomedical research and allied health professions.</p>

37.	ZOO ADK 406-4	Reproductive Biology	a) The study of reproductive biology aims to provide individuals with a comprehensive understanding of reproductive processes, allowing them to apply this knowledge in various contexts, including human and animal reproduction, reproductive health, research, and conservation.
38.	ZOO ADL 407-4	Evolutionary Biology and Biosystematics	a) By studying these topics, students can gain a deeper understanding of the history, diversity, and interconnectedness of living organisms. b) The outcome of such studies is to provide insights into the mechanisms of evolution, the origins of life, and the relationships between different species.
39.	ZOOADL 408-4	Ecology and Environmental Biology	a) The outcome of studying Introduction to Ecology is to develop a foundational understanding of ecological principles and processes. B) This knowledge can be applied to various aspects of ecological research, conservation efforts, and environmental management.
40.	ZOOADL 409-4	Applied Entomology and Fishery	a) It provides insights into the economic and cultural importance of insects and fishes. b) This knowledge can be applied in the applied fields of both insects and fishes.
41.	ZOOMIN 401-4	Developmental Biology	a) Students will be able to acquire knowledge on embryonic development of sexually reproducing animals. b) They also obtain knowledge on metamorphic changes and the role of placenta in mammals
