



## **INTERNAL QUALITY ASSURANCE CELL**

*J.N. College, Boko, Kamrup, Assam*

### **Program outcomes, program specific outcomes & course outcomes for PG programs (Assamese & Mathematics)**

The College is permanently affiliated to Gauhati University and it follows the programme wise curriculum designed by the university. The learning outcomes of the programmes and courses are stated clearly by the university. The same is published in the official website of the university which can be downloaded by the affiliated colleges.

The College has its own mechanism to communicate the learning outcomes of the curriculum to the teachers and the students. The following measures are adopted-

- Hard copy of syllabi and learning outcomes are available in all the departments for ready reference to the teachers and students.
- A web link to the Gauhati University Curriculum and learning outcomes of Programmes and Courses (both UG & PG) is also provided in the college website for reference.
- The departments also arrange Orientation Programmes/Tutorial Meetings to make the students aware of the curriculum and the learning outcomes.
- 

#### **Course outcomes:**

#### **DEPARTMENT OF ASSAMESE**

Students will get a very sound knowledge on Assamese literature, language and culture. They will be well introduced with the north eastern states from its linguistic and cultural point of view. They will get a clear knowledge on development of writing and speaking languages. The study of literature as well as language is the study of our intellectual history and civilisation. It will develop the aesthetic senses and socialistic approaches of the students. In addition to these, the students will be able to develop their concept on some noble field viz. grammar, philosophy, history, anthropology etc. Students will be able to know not only about the Indian literature but also the world literature. They will be well introduced with the varied form of literature e.g. short story, novel, song, poetry etc. By the skill enhancement course, the students will be able to start their profession as proof reader or creative writer or script writer. Through project work they will learn to do work in group and they have scope for their innovation.

COURSE	OUTCOME
--------	---------

Core course	Aims to make students acquainted with the history of Assamese literature and language. Many famous and historically important writers and writings are introduced to the students. It intends to give the knowledge of the culture of Assam, north east and India. Give thorough knowledge of General Linguistic, different form of language, language families etc. It intends to give an idea of the development of Assamese scripts. It also makes a student expert in grammar. It exposes the students to the different form of Assamese literature in particular and Indian literature in general e.g. poetry, short story, novel etc. It also gives knowledge of literary criticism.
AECC	This course will develop the speech delivering capacity, social adaptability and acceptability of a student through speech.
SEC	Students can do Assamese typing, proof reading and also can start career as creative writer.
DSE	Give knowledge of folk literature, Romantic poetry, Sankardev, Assamese science fiction etc. It will help to improve the student's creativity through project work.
GE	This course teaches the students about recitation, stage performance and musical aspects.
1. History of Assamese language, Oral literature to modern lit. Development of script –Specially Brahmi lipi	Students will gain knowledge about the development of Assamese language, literature and script.
2. Relationship with other modern Indian language, literature	Basic knowledge on Indian literature and language.
3. Language Families of the world	Acquire knowledge on the language varieties and their characteristics
4. Indo European Language families	Gain knowledge on language families of the world.
5. Culture-theory and exercises Specially of north east India	Apart from gaining knowledge, students could understand our cultural roots and heritage, unity among diversity etc
6. Poetry-theory, Brajabulu, old Assamese poetry, Modern Assamese poetry And Criticism	Student can develop their knowledge, understanding skill, feel the essence of creative writing, develop their own writing.
7. Drama-theory Ankiya Naat (old Assamese Drama) Modern Assamese Drama	To gain knowledge about old as well as modern Assamese dramas and their significance in literary arena.
8 Novel-theory, some important novels	To acquire in-depth understanding and critical analysis of various epic novels.
9. Comparative Literature- Indian and foreign	Understand the world community through their study

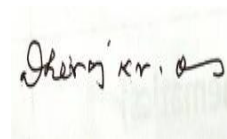
10. Assamese prose	Students can develop their expression through writing as well as talking and learn how to write prose and analytical skill of prose writing.
11. Translation	Students can take translation as profession, feeling attachment with the whole world
12. New trends of study literature and language	Up-to- date knowledge of the philosophy, changing norms of analysis through this content.
13. Criticism	Develop thinking capacity, by completing the course, apart from various government services students could take option in mass communication sector i.e. print, audio-visual and other social media. They can work as editor and translator. Students can also be self-engaged in tourism sector as local guide. They can work as language teacher by establishing own institutes.

#### **DEPARTMENT OF MATHEMATICS (PG)**

Programme Outcome	<ol style="list-style-type: none"> <li>1. After completion of graduation and post graduation students apply their broad knowledge of science across a range of fields, with in-depth knowledge in at least one area of study, while demonstrating an understanding of the local and global contexts in which science is practiced.</li> <li>2. Articulate the methods of science and explain why current scientific knowledge is both contestable and testable by further inquiry. Apply appropriate methods of research, investigation and design, to solve problems in science.</li> </ol>
Programme Specific Outcome	Mathematics graduate(major) and post-graduate students will be able to apply critical thinking skills to solve problems that can be modelled mathematically, to critically interpret numerical and graphical data, to read and construct mathematical arguments and proofs, to use computer technology appropriately to solve problems and to promote understanding, to apply mathematical knowledge to a career related to mathematical sciences.
<b>Course</b>	<b>Outcomes</b>

Linear Algebra	The course will enable the students to learn about the concept of linear independence of vectors over a field, and the dimension of a vector space basic concepts of linear transformations, dimension theorem, matrix representation of a linear transformation, compute the characteristic polynomial, eigenvalues, eigenvectors, and eigenspaces, as well as the geometric and the algebraic multiplicities of an eigenvalue and apply the basic diagonalization result compute inner products and determine orthogonality on vector spaces, including Gram–Schmidt orthogonalization to obtain orthonormal basis find the adjoint, normal, unitary and orthogonal operators.
Programming in C	Able to handle nonlinear equations as those can not be handled analytically. This course has equipped the students to carry out long and tedious computational works particularly when they go for research in some application oriented field and after knowing programming in C, the students can easily shift over to any other programming which are used in different fields.
Operations Research	To inculcate knowledge on maximize the profit and minimize the cost in every place.
Functional Analysis	To inculcate knowledge on n-dimensional norm linear spaces and their properties & proofs.
Topology	To inculcate knowledge on understand the notation of distance function, topological structure and their properties with mathematical proofs.
Partial Differential Equations	The course will enable the students to formulate, classify and transform first order PDEs into canonical form, learn about method of characteristics and separation of variables to solve first order PDE's, classify and solve second order linear PDEs, learn about Cauchy problem for second order PDE and homogeneous as well as non homogeneous wave equations, apply the method of separation of variables for solving second order PDEs
Real Analysis	To inculcate knowledge on real numbers and their properties and able to understand the concept of sequence of real numbers, infinite series and their related results.
Modern Algebra	To inculcate knowledge on various algebraic structures and their properties.
Discrete Mathematics	To inculcate knowledge on understand the notation of mathematical thinking, mathematical proofs, and graphical thinking and able to apply then in problem solving, become familiar with Boolean algebra, Boolean homomorphism, Karnaugh diagrams, switching circuits and their applications
Complex Analysis	To inculcate knowledge on complex numbers and their properties, to introduce the basic ideas of analysis for complex functions with visualization through relevant practicals.

Numerical Methods	To inculcate knowledge on algebraic equations solved by Numerical Methods. This will enable the students to learn some numerical methods to find the zeroes of nonlinear functions of a single variable and solution of a system of linear equations, to know about methods to solve system of linear equations, interpolation techniques to compute the values for a tabulated function at points not in the table, applications of numerical differentiation and integration to convert differential equations into difference equations for numerical solutions.
Dynamical System and Fractal Geometry	1. To inculcate knowledge on algebraic equations solved using differential equation.
Number Theory	This course will enable the students to learn about some fascinating discoveries related to the properties of prime numbers, and some of the open problems in number theory, viz., know about number theoretic functions and modular arithmetic, solve linear, quadratic and system of linear congruence equations.



(Dhiraj Kumar Das)  
Cordinator, IQAC  
Jawaharlal Nehru College, Boko

**Co. Ordinator**  
**I.Q.A.C.**  
**J.N. College, Boko**