

Program Outcomes, Program Specific Outcomes and Course Outcomes

Barama College, Barama

Barama College, Barama offers undergraduate programme in both Science and Arts stream, which requires three years of full time study consisting of six semesters. The College offers 8 honors' and 8 regular courses in Arts stream. The subjects are Assamese, Bodo, Economics, Education, English, History, Philosophy and Political Science. It also offers 6 honors' and 6 regular courses from Science stream and the subjects are Botany, Chemistry, Geography, Mathematics and Zoology. All the courses are focused on increasing a students' knowledge and critical thinking in accordance to the syllabus and curriculum prescribed by the affiliating university i.e. Bodoland University, Kokrajhar. The programme outcomes, programme specific outcomes and course outcomes are mainly the subject of the affiliating university. However for communication with all the stakeholders these are important and uploaded in the college website.

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

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

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

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

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

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

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

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

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

8. Bachelor programme in Geography	
Programme Outcome	The three year Under Graduate programme in Geography nourishes the students with knowledge in different areas of Geography like Geo-morphology, Oceanography, Climatology, World Regional Geography, Soil and Biology, Economic Geography, Human Geography, Development and Planning, Cartography and Statistics.
Programme Specific Outcome	The students gain knowledge in different areas of geography. The field trips and outdoor classes organized by the department give the

	students the opportunity to apply their classroom knowledge in real life. The students are given training in the use of Geographical Information System (GIS). Students can go for higher studies in Geography, Tourism, Remote sensing etc.
Course Outcome	<p>Human Geography involves understanding the origin, migration, growth, human race, problem of population, mode of living, man resource, demographic changes and man-land ratio.</p> <p>Economic Geography deals with the distribution and production of resource, mobilization, utilization and exploitation of resources, sustainable development and future trend, environmental problems and optimum utilization of resources, economic activity and human resource.</p> <p>Regional Development Planning requires the students to compare national planning techniques. Study of Regional India includes knowledge of the resources and planning in indigenous resources, locational significance of India, avenues for tourism development and border trades.</p> <p>The course equips students with Cartographic and Quantitative Methods of study and use of Statistical techniques, principles of application of Geographical Information System, GPS and Remote Sensing.</p> <p>Some other areas are Population and Settlement Geography, Social and Political Geography which studies environmental influences on population.</p> <p>The course especially includes a study of the regional geography of North East India with special focus on Assam.</p>

9. Bachelor programme in History	
Programme Outcome	The programme basically deals with past events written in a chronological account and relating to the present. Sound Knowledge of different Historical Periods in each semester is studied with a definite emphasis on modern research and trends.
Programme Specific Outcome	An Interdisciplinary Perspective of the current syllabus provides a student new insights into areas of literature, political ideas, economic planning and cultural form. Inclusion of courses dealing with the development of Archaeology and museums can enhance the vision of the students and develop skills. This course prepares students for higher studies in History, Archaeology, Culture Studies, and Mass Communication etc and for any competitive examination including Civil Services.
Course Outcome	The Under Graduate course in History comprises of Ancient, Medieval and Modern Indian history, The course also includes History of Great Britain, European History (different periods) and International Relations. To give the students an insight into the regional history the course includes the history of Assam of different periods.

10. Bachelor programme in Mathematics	
Programme Outcome	Completion of the bachelor programme in Mathematics prepares the students to understand and view mathematical structures. They will

	learn numerical aptitude applying both qualitative and quantitative knowledge for their future career. The elective paper fuzzy set theory imparts thorough knowledge in fuzzy mathematics which is very useful for the students to do their research programs in future. The UG curriculum offers need based computer courses which enable the students to solve computer oriented numerical problems.
Programme Specific Outcome	After successful completion of the programme, students can opt for an advanced course such as Pure Mathematics, Applied Mathematics, Computer applications etc., under Gauhati University as well as other Indian Universities. Job market for a graduate in Mathematics is also very bright. The mathematics UG students after the completion of the course will gain a thorough knowledge in preparing competitive examinations conducted by different banking sectors, APSC and UPSC. Abstract courses and mathematical structures included in the UG program enable the students to prepare themselves for higher education leading to M.Sc./MCA degree courses.
Course Outcome	The Bachelor programme in Mathematics are well planned to cover a wide spectrum of topics in Mathematics as Classical, Abstract and Linear algebra and their applications; Analytical geometry of dimension 2 and 3 and vector analysis ; Differential and integral calculus; Real analysis and Complex analysis ; Basic courses of topology and Functional analysis ; Ordinary and partial differential equations and the theory of integral transforms ; Statics and hydrostatics ; Operations research and game theory ; Computer programming, Numerical analysis and computer aided numerical practical and Probability and statistics

11. Bachelor programme in Philosophy	
Programme Outcome	The bachelor programme in Philosophy deals with the study of Greek Philosophy, Indian and Western Philosophy and Ethics, Philosophy of Religion- theory, origin and development, Epistemology and Metaphysics, Social and Political Philosophy and Logic.
Programme Specific Outcome	The programme develops introspective thinking and analytical abilities of the students. At the end of the course students opt for higher studies in Philosophy. Students are expected to be acquainted with Classical, Medieval and Modern Philosophers and their writings. The programme consists of Classical, Medieval and Modern Philosophies both Indian and Western.
Course Outcome	Since topics on Ethics, Psychology, Logic, 20th century philosophy and many more present day relevant philosophical thoughts are all included in the syllabus, the students are expected to acquire deep understanding of present, relevant philosophical thoughts which again would help them in research work. Along with it the syllabus also had papers on Logic and Reasoning.

12. Bachelor programme in Physics	
Programme Outcome	After completion of the programme in Physics, Students are

	intended to develop a conceptual understanding of physics principles. They will be able to demonstrate concepts in Newtonian Mechanics, Electromagnetism, Thermodynamics and Quantum mechanics. They will be able to translate a physical description to a mathematical equation and conversely explain the physical meaning of the mathematics, represent key aspects of physics through graphs and diagrams and use geometric arguments in problem-solving.
Programme Specific Outcome	On the completion of bachelor programme in Physics, students learn the basic mathematical tools, needed to understand different branches of Physics. They are trained to apply these techniques through numerical exercises. They are familiarized with hands-on training in the furnished and equipped laboratory for practical verification of the physical theories that they learn during class lectures. It makes the students eligible for the further post-graduate studies, in physics, electronics, instrumentation, computer applications etc. They will discover of physics concepts in other disciplines such as mathematics, computer science, chemistry etc. Three years undergraduate programme in Physics also prepares the students for career as teachers or researchers in different branches in pure and applied physics.
Course Outcome	The course in physics includes different properties of natural objects, like mechanical, thermal, electrical, magnetic properties etc. In accordance with the recent development in information technology, the students get familiarized with the computation facility with motivations for physics applications. They learn the basic mathematical tools like vector analysis, differential equations, matrix and determinant, Complex analysis etc. The mechanical and general properties of matters are also discussed. Several particles in nature move with a velocity comparable to velocity of light. Students learn the Einstein's modification on the concept of space-time, through special theory of relativity. The Physics of immobile charges and charges in motion are also studied in this course. The students learn different types of waves and oscillations, viz., acoustical as well as electro-magnetic. Kinetic Theory, Thermodynamics and Statistical mechanics are three approaches of thermal physics. Students learn their details and difference in approach. They are familiarized on the different statistics.

13. Bachelor programme in Political Science	
Programme Outcome	Completion of the bachelor programme in Political Science leads a significant thrust on the knowledge of Indian Constitution, Indian Politics and Government, Public Administration and International Relations. It also requires students to study the constitutions of China, Switzerland, United Kingdom and America. The course includes Sociology, Women and Politics, Western and Indian Political Thinkers and Human Rights.
Programme Specific Outcome	The programme familiarizes the students with different approaches to the study of politics and orients them on contemporary political problems and behaviour thus enabling them to formulate a general idea on political phenomena. It also helps them to comprehend the basic structure and processes of government systems. The

	programme prepares students for pursuing higher education in Political Science. It orients students towards national and state level competitive examinations like APSC, UPSC, etc. Many students also pursue courses in Law.
Course Outcome	The Course outlines of the discipline of Political Science are divergent and contemporary. The course completion results the study of the different concept of political theory and comparative politics. It also study the concept of different political systems , Indian Government and politics, knowledge about Indian constitution, theories of International relations, concept of interrelations among the states and its impact, legislative practices and procedures , human rights, social movements in contemporary India , basic theories of public administration and local governance.

14. Bachelor programme in Zoology	
Programme Outcome	After completion of the bachelor programme in Zoology students will gain knowledge and develop skill over animal sciences, understands the interactions among various living organisms, internal structure and functions of various body parts. Understands the complex evolutionary processes and behavioural pattern of various animals. Students are able to correlate the physiological and biochemical processes of animals.
Programme Specific Outcome	As a result of the completion the students will understand ecological factors, environmental conservation processes and its importance, pollution control and biodiversity and protection of threatened species. They will gain knowledge about applied fields like sericulture, fisheries, apiculture, poultry and dairy farms along with tissue preparation, molecular and statistical techniques. They will understand about various concepts of genetics and its importance in human health. They will able to apply such knowledge in the practical field which will give them different job opportunity. Contributes the knowledge for Nation building.
Course Outcome	After completion of the course, student will understand the nature and basic concepts of cell biology, genetics, taxonomy, physiology, ecology and applied Zoology. They will be able to analyse the relationships among animals with their ecosystems. They can perform procedures as per laboratory standards in the areas of Taxonomy, Physiology, Ecology, Cell biology, Genetics, Applied Zoology, Clinical science, tools and techniques of Zoology, Toxicology, Sericulture, Biochemistry, Fish biology, Animal biotechnology, Immunology and research methodology as a result of the course completion. Develops concepts regarding various theories and experiments about organic evolution. Imparts knowledge to the student regarding various laws of ecology, types of ecosystem, population and community characteristics and dynamics. Students gain fundamental knowledge of environmental pollutions due to toxic materials and their effects over ecosystem and learns about sustainable development, animal behavior and sociobiology, applied zoology, conservation biology & wildlife ,bio-informatics, understands concepts of fisheries, sericulture, apiculture, poultry, dairy along with tissue and cell culture techniques.

