

KIANG NANGBAH GOVERNMENT COLLEGE, JOWAI::



COURSE OUTCOME:: B.Sc, B.COM & B.A

DEPARTMENT OF ENGLISH:	
Course Name	Course Outcomes
Paper I-Poetry I and II	Poetry I and II are intended to provide a comprehensive guide to English poetry, its development, its forms and movements, throughout the ages.
Paper II-Fiction- I	This course is designed to familiarize students with the emergence of the novel as an art form in the 18th century and its successive development throughout the 18th and 19th centuries. It includes five representative texts for non- detailed critical study. It is important that the texts be related to the age in which they appear.
Paper III-Drama	This course traces the development of drama from the Elizabethan age to the post –war era of the 20 th century. It introduces drama as a literary as well as dramatic genre with due emphasis on dramatic elements (like plot, structure, etc.). The course also aims to give students an understanding of the major dramatic works with a sense of their historical and cultural and the techniques that inform them.
PaperIV Language and History of English Literature	This course will introduce the student to the Literary History of English Literature. It will provide the necessary background for the study of English Literature. The language component will sensitize the student to the formal aspects of the English Language.
Paper V-Poetry II	Poetry II begins with a study of the major poets of the Romantic Movement in English poetry of the 19 th century. Besides embodying the major preoccupations of the Romantic poetry the poems are also meant to reflect the times. The Victorian Period with its troubled complexity, is represented by Hopkins ‘the proto- modernist’ 19 th century poets, Yeats a modern and uncompromising Romantic poet, Eliot the high priest of Modernism, and Auden the interpreter of social ills. The section ends with Ted Hughes , a poet laureate, in whose poery can be found a synthesis of two separate traditions of 20 th century verse.
Paper VI- Fiction II	This course is designed to acquaint students with important works of fiction of the second half of the 19 th century and first half of the 20 th century. The changes that came over the English novel in the first half of the 20 th century amounted to a radical redefinition of the nature and the function of fiction. Some representative novels of the period have been included in this course so as to familiarized the students with important trends. Special credit will be given to evidence of background reading in examination papers.

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Paper VII- Literary Criticism	The objective of the course on Literary criticism is to orient students with the study of significant texts on Criticism. This will provide them with the necessary grounding in the subject.
Paper VIII-Indian Writing in English	This paper will provide the student with crucial insights into the kind of literatures that are written in English. It will open up areas of literature that will help the student to understand the kind of writing that is currently becoming widely studied.

DEPARTMENT OF KHASI

Course Name	Course Outcome
Paper I-Culture in Khasi Literature	Make students aware and preserve of our own culture, instill pride and confidence.
Paper II-History of Khasi Literature	To trace and study the development of Khasi literature till the present period (Novels, poitri, drama, fiction, prose etc.)
Paper III-Khasi Language Study	To understand the Khasi Language and facilitate proper use of language. Introduction to linguistic elements and structure of the Khasi language.
Paper IV-Khasi Literary Criticism	To understand the role of criticism as an integral part of literature development. Understanding the theories and literary criticism would enhance the development of critical thinking which is a pre-requisite condition to the understanding of the forthcoming papers 5 th , 6 th and 8 th of the current syllabus
Paper V & VI-Khasi Drama and Khasi Fiction	To facilitate the art of theory writing and narration specific to vernacular and indigenous interpretation while linking such interpretation with the Global Literature, Literary figures and works.
Paper VII-Literature in Translation	To equip students in the art of translation so as to enrich the language and literature through the analysis of other Societies and languages. Apart from knowing their own literature and culture of other Societies, they also learn to understand the originality philosophy, art of writing and techniques of translation especially of English literature.

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Paper VIII-Khasi Poetry	To foster the students to understanding the theory of poetry depth involved in the processes and the art of writing poetry. In the meantime, the students are able to understand more about the different forms and the styles of writing poetry.
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DEPARTMENT OF ECONOMICS:

Course Name	Course Outcomes
Paper I Introductory Economic Theory*	The basic concepts of Microeconomics and Macroeconomics are introduced in this paper
Paper II Development and Environmental economics*	The paper will enable the student to learn some development models and issues related to economy environment interaction.
Paper III Indian Economy*	Students will be acquainted with the Indian economic features and various aspects of economic reforms. A specific unit is devoted to the understanding of the economy of North-Eastern region of India.
Paper IV Mathematics for economist	This paper deals with the essential mathematical ideas and tools used for analyzing various concepts of economics principles and relations. Students will learn the mathematical tools with applications in analysis of economic phenomenon.
Paper V Advanced Economic Theory	The paper is a continuation of Paper –I in which students will have some in-depth understanding of Micro and Macro-economic concepts, which are essential for the students of Economics Honours only.
Paper VI International Economics	This paper introduces the basic international economic principles, theories and its applications to the real world situations.
Paper VII Statistics	In this paper, students will acquire knowledge on basic tools of statistics and methods in analysing various economic problems and decision making in terms of consumers, producers and market behaviour.
Paper VIII Public Economics	This paper is structured to impart knowledge on how the fiscal policies of the government affect the macroeconomic objectives of allocative efficiency, distributive justice and economic stability.

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DEPARTMENT OF EDUCATION:


Course Name	Course Outcome
Paper I- EDUCATIONAL PSYCHOLOGY	Students will be able to:- 1. Understand the concept, need, scope of educational psychology. 2. Apply psychological principles in Teaching and Learning Process 3. State the characteristics of growth and development at different stages of human development. 4. Understand the nature and theories of Intelligence (Two Factor & Multiple Intelligence) 5. Identifies the characteristics of creative individual 6. Assess the implication of the theories of Learning on Learning 7. Differentiate the difference between guidance and counseling and state the different types of guidance and counseling.
Paper II- FOUNDATIONS OF EDUCATION	Students will be able to 1. State the objectives of Education at Different Levels 2. Appraise the different schools of philosophy and their application in the field of education 3. Describe the contribution of education to social change 4. Synthesize the concepts of freedom and Discipline and their application in the educational system 5. To analyze the impact of social changes on education 6. Understand the cultural heritage of India. 7. Describe the structure and functions of the society and the process of social interaction towards better human relationships.
Paper III- EDUCATIONAL SYSTEM IN INDIA	Students will be able to:- 1. Students will understand the evolution of educational system in India from ancient and medieval period. 2. Evaluate the impact of the Educational Decisions during colonial period under the British rule on the Educational system in India. 3. Students will be familiarize with the legal and constitutional provision in education. 4. Describe the contribution of the different Educational Commissions as set up by the Indian Government in the post-Independence India. 5. State the National Policy of Education (1986) and its recommendations. 6. Students will become aware of the main challenges and problems faced by educational system in India.
Paper IV- EDUCATIONAL THOUGHT & PRACTICES	Students will be introduced, acquired knowledge and understanding about the educational thought and practice of ancient thinkers, contemporary Indian thinkers, western thinkers and with the innovative practices in education.



Paper V- EDUCATIONAL EVALUATION & STATISTICS	Students will understand the concept of measurement and evaluation as applied to education. They will be familiarize with the various types of educational and psychological tests and developed the competency in solving various statistical problems.
Paper VI- CONTEMPORARY INDIAN EDUCATION	<ol style="list-style-type: none"> 1. Students will be familiarize with some interventions in elementary education 2. Students will be acquainted with the efforts made regarding secondary education 3. Students will be familiarised with some quality issues in Higher Education 4. Students will understand some recent issues & trends in education
Paper VII- EDUCATIONAL TECHNOLOGY	<ol style="list-style-type: none"> 1. Students will understand the nature & scope of education technology 2. Students will be acquainted with the various innovations in educational technology 3. Students will understand the functions, principles and operations of teachings 4. Students will be familiarised about various levels & skills of teaching.
Paper VIII- SCHOOL MANAGEMENT	<ol style="list-style-type: none"> 1. Students will develop knowledge and understanding of the concept of School Management 2. Students will understand the process of School Management 3. Students will become familiar with the Concept, Need and Scope of Educational Planning 4. Students will understand the Concept, Determinants & Principles of Curriculum Construction

DEPARTMENT OF HISTORY:

Course Name	Course Outcomes
Paper I- History of Ancient India	Students will be familiarized with the social, cultural, economic and political developments in India from the Harappan Culture till the period before the beginning of the Muslim rule. They will be introduced to the elements of change and continuity in history.
Paper II-History of Medieval India	This course offers an overview of the major trends and developments in India during the period under study. Students will be familiarized with the socio- economic and cultural patterns and will understand the polity and society as they took shape during this period.
Paper III-History of Modern India	Students are provided with the information and knowledge of the main trends and developments in India from the 18 th -20 th centuries.
Paper IV- Histography	Students will be introduced to the basic concepts that go to make the subject matter of History.


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Paper V-Modern Europe Mid 15 th Century to World War II	Students will be acquainted with the political, social and economic trends of developments and the resultant emergence of ideologies that helped to shaped the modern World.
Paper VI- Contemporary World 1939- 1990	Students will be acquainted with the major political, social, economic and scientific developments in the world and their resultant effects.
Paper VII-History of the United States of America (1763- 1945)	Students will gain knowledge on the rise of the United States of America as a nation as well as a major world power.
Paper VIII-History of North East India 1822- 1972	Students will be familiarized with the major trends of the political, social and economic developments in North East India from 1822 to the reorganization of states in 1972.

DEPARTMENT OF POLITICAL SCIENCE:

Course Name	Course Outcomes
Psc. 01- Political Theory	This is an introductory paper to the basic concepts, ideas and theories in political theory in which various perspectives, dimensions and the contemporary relevance of the paper is discussed.
Psc. 02-Major Political System	The paper studies the legal provisions, ideological basis, institutional arrangements and their socio – economic background of four of the most prominent states in the world. The critical evaluation of the political processes helps the students to gain an understanding of the dynamics of political system of the four famous constitutions in the world(U.K , U.S.A, Russia and China).
Psc. 03-Indian Political System	The paper focuses on the political processes and the actual functioning of the Indian Political System, with an emphasis on the role of social and economic processes in the functioning of the political system in India which will shaped the students as citizens who are aware of the ideals and philosophies of the Indian Constitution.
Psc. 04International Politics	Students will be familiarized with different theories on International Politics, and to make them aware of the different units and actors that operate in the International system. This paper explains the scope and subject matter of international relations as an autonomous academic discipline. Approaches and methods to study the discipline through issues like terrorism, cold war, the dominant theories of power and the different aspects of balance of power. The students are also expected to be able to grasp the operation of various international organizations and the importance of different treaties.

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Psc. 05-Western Political Thought	This paper provide an insight into the dominant features of western political thought with a view to understand how the great thinkers explained and analyzed political events and problems of their time and prescribed solutions. Students are expected to be able to study the different theories and concepts which and compare them with the contemporary social, economic and political realities.
Psc 06- Modern Indian Political Ideas.	This paper provides an insight into the dominant ideas of and contributions of Indian Political Thinkers during the phase of National Struggle for freedom and to critically evaluate their ideas. The students can gain more knowledge about the freedom struggle – its consequences and outcome.
Psc. 07- Government and Politics in North – East India	The objective of this course is to enable the students to understand the political developments that had taken place in the North- Eastern Region as well as to equip them with the knowledge of what is going on politically in and around the different states of the region.
Psc.08. International Organizations	The expected outcome of the paper is to familiarize students with the working ,functioning , achievements and challenges of the United Nations in its quest for peace and international security and enable them to understand the different issues taken up by the UN.

DEPARTMENT OF PHILOSOPHY:

Course Name	Course Outcome
Paper I- Epistemology and Metaphysics	Students will be introduced to the basic concepts in Philosophy, so that they are able to think and understand the questions of Knowledge and Metaphysics
Paper II- Logic	To develops critical& logical thinking in students and also to
Paper III-Social and Political Philosophy	To introduced the concepts in Social and Political philosophy so that students may understand and fulfill the responsibilities as a citizen.
Paper IV- Indian Philosophy	Students when introduced to the Indian Classical Traditions, both Orthodox and Heterodox, would understand and appreciate the Vedic/Classical traditions of India.
Paper V-Western Philosophy	Students will be introduced to the Western Classical Philosophical traditions i.e. Empiricism, Rationalism, Realism and Idealism.
Paper VI-Religion	Students will understand the need of thinking beyond a particular religious tradition to which one is born and practiced. Students will be able to broaden their approach towards other religions and develop Right/ ideal attitude towards other religion.

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Paper VII-Ethics	Students when introduced to the basic moral concepts and traditional theories of moral philosophy will develop the right/ideal practice and character building.
Paper VIII-Philosophy of Mind	Students will be familiarized with the basic concepts in the field of Philosophy of Mind.

DEPARTMENT OF PHYSICS:

Course Name	Course Outcome
Mechanics	<p>At end of the course, students will be able to:</p> <ol style="list-style-type: none">1. Acquire the basic knowledge of mechanics, co-ordinate system, properties of matter2. Apply the conservation of rotational motion and conservation of mass, conservative nature of central forces, application of central forces and Coriolis force.3. Understand the concept of the theory of relativity4. Determine the moment of inertia of a body theoretically and experimentally5. Use Poiseuille's equation and Bernoulli's equation for solution in fluid dynamics.
Optics	<p>At end of the course, students will be able to:</p> <ol style="list-style-type: none">1. Understand the meaning of Fermat's principle and its application2. Understand the general theory of image formation and solve problems using the ideas of Lens formula Understand the basic concept of wave optics. Scattering and dispersion of light.3. Understand the basic concept of wave optics. Scattering and dispersion of light.4. Analyze simple examples of interference and diffraction phenomena5. Explain the principle of operation of Newton's ring, Michelson interferometer and Fabry-perot interferometer.
Waves & Acoustics:	<p>At end of the course, students will be able to:</p> <ol style="list-style-type: none">1. Describe and quantitatively analyze the behavior of sound and ultra-sonic wave. To apply the mathematical formulation that describes them with example in many areas of Physics2. Explain the principle of ultrasonography and its applications.3. Understand the principle of acoustics of buildings and the reverberation time required for the construction of the auditorium4. Describe and quantitatively analyze the behavior of wave function. They should be able to differentiate the phase velocity and group velocity.

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	5. Understand the meaning of damping and force vibration and their implication in real world.
Electromagnetism	<p>At end of the course, students will be able to:</p> <ol style="list-style-type: none">1. Understand the concept and meaning of field an electric field by means of field lines and to solve problems which require the use of wave representation of electric and magnetic field in propagating of electromagnetic waves and understand the concept of Maxwell displacement current. The lines of force produced either by current-carrying conductors or by permanent magnets.2. Show and understand the concept of an electric field, field of force, field, electric field strength, the force exerted by electric field per unit positive charge place at that point.3. Solve problems by applying Biot-Savart law, Gauss law and Maxwell equations.
Electronics	<p>At end of the course, students will be able to:</p> <ol style="list-style-type: none">1. Understand the basic knowledge of electronics, semi-conductor, PN junction and its application in broader context2. Understand the Transistor and its application in amplifier3. Draw the truth table of different logic gates.4. Apply the knowledge of operational amplifier in real life activities.
Thermal Physics	<p>At end of the course, students will be able to:</p> <ol style="list-style-type: none">1. Have a clear concept of kinetic theory of gases and the laws of Thermodynamics.2. Interpret and apply the concept of Carnot's engine in day to day life.3. State and differentiate the different laws of thermodynamics4. Cite example of reversible and irreversible changes related to Thermodynamics.
Atomics, Nuclear & Solid State	<p>At end of the course, students will be able to:</p> <ol style="list-style-type: none">1. Describe and explain the shape, the size and behavior of the atom and molecule.2. The various forces operated inside the atom and molecules and picture it into a larger context.3. Describe, explain and categorize he mechanism behind the formation of molecule.4. Understand the application of nuclear physics in real life.5. Understand and explain the various methods used to determine nuclear shape and sizes.6. Understand and explain the theory of nuclear fission and fusion and

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	<p>its application in general.</p> <ol style="list-style-type: none">7. Acquire a clear concept of Superconductivity8. Have clear concept of electronics and vibrational properties and behavior and the application of solid state systems.9. Have the basics knowledge of magnetic behavior of various materials
Quantum's Mechanics:	<p>At end of the course, students will be able to:</p> <ol style="list-style-type: none">1. Acquire the basic ideas and concept of quantum mechanics and its application in various physical problems.2. Explain the basic theory of quantum mechanics involving uncertainty principle and relate it with real life.3. Write the Schrodinger equation and its application in solving problems in various branches of physics especially in quantum mechanics and in nuclear physics.
FORTTRAN	<p>At end of the course, students will be able to:</p> <ol style="list-style-type: none">1. Understand the various functions of the computer and its application. They should be able to differentiate RAM and ROM of the computer.2. Build the knowledge on object oriented programming concept using FORTRAN and carried it out in their higher studies.3. Understand the various FORTRAN verb and its meaning and uses in programming4. Understand the various operating systems of the computer and the advantages using Linux base operating system

DEPARTMENT OF CHEMISTRY

SEMESTER -1

CHEM-101 (INORGANIC CHEMISTRY)

Nucleus and radioactivity -I.	<p>At end of the course, students will be able to:</p> <ol style="list-style-type: none">1. To study the nuclear particles, Nuclear binding energy, Mass defect, n/p ratio and Packing fraction2. Understand natural and Artificial Radioactivity3. To study 1st order of rate equation of radioactive Disintegration4. To understand the Importance of radioactive isotopes and Concepts of fusion and fission
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Liquid State-I	At end of the course, students will be able: <ol style="list-style-type: none">1. To introduce general properties of liquid state2. Definition & description of vapour pressure, Surface Tension, Viscosity, Refractive Index surface tension and important applications3. Elementary discussion on structure and types of liquid crystals
Solid State-I	At end of the course, students will be able: <ol style="list-style-type: none">1. Introduce general properties of solid state2. Understand the Definition & description of Law of constancy of interfacial angles, crystal planes, law of rational indices.3. To have knowledge on Miller indices, space lattice and unit cell.4. Packing of constituent particles in a crystal5. Understanding crystal defects.
SEMESTER- II	
CHEM EH 201/PART-A	
Thermodynamics	At end of the course, students will be able to: <ol style="list-style-type: none">1. zeroth law of thermodynamics2. First law of thermodynamics: Statement, internal energy, enthalpy3. Concept of heat and work, path functions and inexact differentials4. Definition of system and surrounding, types of systems, intensive and extensive variables
Thermochemistry	At end of the course, students will be able to: <ol style="list-style-type: none">1. Explain Exothermic and endothermic reactions2. Solve Kirchoff's equations- influence of temperature on ΔH and ΔU of a reaction3. Explain Enthalpy of formation, standard state, enthalpy of combustion, enthalpy of neutralization, enthalpy of solution, enthalpy of dilution4. Define Hess's law of constant heat summation
SEMESTER-III	
CHEM EH 301(Part -A)	
Thermodynamics- II	At end of the course, students will be able to understand: <ol style="list-style-type: none">1. Carnot cycle and its efficiency and Carnot's theorem2. Gibbs function (G) and Helmholtz function (A)3. Criteria for thermodynamic equilibrium and spontaneity4. Clausius-Clapeyron equation5. Entropy (S) as a state function, entropy changes of ideal gases in

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	different processes
Name of the Course: d and f block elements	At end of the course, students will be able to understand <ol style="list-style-type: none">1. the grouping and electronic configuration of d and f block elements.2. Whether the general properties of the d and f block elements were learned by the students satisfactorily3. Upto what extent the teacher could explained the variation in the properties of the d and f block elements4. Does the explanation on the important reactions, structure and uses of some compounds of d and f block elements?
SEMESTER-IV CHEM EH 401/PART-A	
Electrochemistry-II:	At end of the course, students will be able to understand: <ol style="list-style-type: none">1. Electrochemical cells2. Half cells: types and examples; types of reversible electrodes; Electrode reactions3. Nernst equation and standard electrode potentials4. Reference electrodes; sign conventions5. Electrochemical series
Phase Equilibria	At end of the course, students will be able to have clear concept of: <ol style="list-style-type: none">1. Phase rule and meaning of the terms phase, components and degrees of freedom2. Phase diagram for one component systems (water and sulphur systems)3. Congruent (phenol-aniline) and incongruent (NaCl-H₂O) melting points.4. Nernst distribution law – derivation and its application5. Lower and upper critical solution temperatures (triethylamine-water, phenol-water and nicotine-water systems), steam distillation
SEMESTER-V CHEM H 502 PART – A	
Liquid State-II	At end of the course, students will be able to: <ol style="list-style-type: none">1. Determination of surface tension, viscosity and refractive index of liquids.

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	<ol style="list-style-type: none">2. Understand the Physical properties and chemical constitution-additive and constitutive properties, molar volume, parachor, specific and molar refraction and also discuss how Parachor and molar refraction measurements are useful in the structural elucidation3. Differentiate Polar and non-polar liquids, dielectric constant, dipole moment, structure of molecules4. Clausius-Mossotti equation5. Dipole induced dipole and vander Waals interactions in molecules
Crystalline State-II	At end of the course, students will be able to: <ol style="list-style-type: none">1. Understand Symmetry elements in crystals-plane of symmetry, axis of symmetry, centre of symmetry2. Seven crystal systems3. Explain the X-ray diffraction of crystals4. Derive Bragg equation and explain Miller indices5. Crystal structure determination- Explain rotating crystal and powder pattern method6. Frenkel and Schottky defects.
Symmetry elements and Symmetry operations And Magneto chemistry	At end of the course, students will be able: <ol style="list-style-type: none">1. To Understand How far is the Concepts Symmetry elements , symmetry operations and Point group is made clear to the students2. Upto what extent the teacher could explained the types of symmetry operations, possible symmetry elements and Point group3. To Understand Upto what extent the teacher could explained Curie and Curie-weiss law4. Does the explanation about origin of magnetism, meaning of paramagnetism, diamagnetism ferromagnetism and Antiferromagnetism was explained appropriately5. Is the magnetic behavior and Calculation of magnetic moment being made clear to the students
SEMESTER-VI CHEM H 602/PART-A	
Boltzmann Distribution	At end of the course, students will be able to: <ol style="list-style-type: none">1. Have clear idea of mathematical and thermodynamic probability2. Define the Entropy and probability3. Understand the application to barometric distribution formula4. Have clear idea of partition functions5. Apply Boltzmann distribution (without derivation) for non-

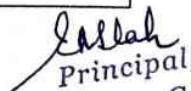
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	degenerate and degenerate cases
Elementary Quantum Mechanics	At end of the course, students will be able to: <ol style="list-style-type: none"> 1. Understand the failure of classical mechanics 2. Define Black-body radiation, Planck's radiation law, photoelectric effect, Compton effect, heat capacity of solids 3. Answer the Postulates of quantum mechanics 4. Solve Particle-in-a-box, rigid rotor 5. Know the Quantum numbers and their importance
Electrochemistry-III	At end of the course, students will be able to: <ol style="list-style-type: none"> 1. Answer the Activity and ionic activity coefficient; mean ionic activity 2. Know what is Ion atmosphere; electrophoretic and relaxation effects 3. Define Debye- Huckel theory (qualitative) and the limiting law 4. Calculate the thermodynamic parameters (ΔH, ΔG, ΔS and K) from cell EMF 5. Solve the Applications of Ag/AgCl, quinhydrone and glass electrodes. potentiometric titrations with examples

PARTMENT OF MATHEMATICS

Course Name	Course Outcomes
Paper I Calculus I and Algebra I	Students should be able to: <ol style="list-style-type: none"> 1. Solve problems on matrices and sets including solutions of equations by matrix methods. 2. Plot graphs of functions and to determine continuity or discontinuity from the graph . 3. Calculate limits in indeterminate forms by the repeated use of L'Hospital rule 4. Understand the geometrical meaning of definite integral and derivative ,the relationship between derivative and definite integral as expressed in fundamental theorem of integral calculus. 5. Evaluate integrals of rational functions by method of partial fractions 6. Explain the relationship between the derivation of a function as a function and the notion of the derivatives as the slope of the tangent line to a function at a point 7.solve the differential equation by method of separation of variables and homogeneous method 8. compute all the solutions of second order linear differential equation with constant coefficients


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	9. understand the difference between relations and functions 10. evaluate definite integral by method of summation
Paper II Geometry and Vector Calculus	The student should be able to 1. understand and visualize straight lines, planes, spheres, cylinders, cones, to determine their equations, solving problems on these and other related problems in real life. 2. Represent vectors analytically and geometrically and compute dot product and cross product of vectors, 3. Compute the gradient of scalar fields, curl and divergence of vector fields, directional derivative, 4. Calculate the shortest distance between two skew lines 5. Find the equations of tangent and normal to a conic at a point
Paper III Algebra II and Calculus II	The student should be able to 1. understand the definitions of groups, determine whether a set with a binary operation is a group, determine whether a group is abelian and cyclic, find the number of subgroups in a finite groups 2. distinguish between reducible and irreducible polynomials, solve polynomials over rationals by the available methods, apply division algorithm and to find the relation between roots and coefficients 3. find limits of sequences, determine convergence of sequences and series by different tests of convergence viz, Root test, Raabe's test, Leibnitz's theorem 4. apply Rolle's theorem and Mean value theorems in simple functions, 5. apply integrals to find areas of plane curves and surfaces and volumes of solids of revolutions.
Paper IV Statics and Dynamics	The student should be able to 1 define Resultant, component of a Force, like and unlike parallel, Moments of a forces and couples with examples. 2. find the resultant and equilibrium of coplanar forces 3. understand the basic concept of velocities, accelerations, forces, work, kinetic energy and find the loss of kinetic energy for the case of direct impact and oblique impact 4. define Projectiles, and prove that the path of a Projectile is a parabola 5. find the tangential and normal acceleration. To discuss the motion inside and outside a vertical circle
Paper V Elementary number theory and advanced algebra	The student should 1. have a clear understanding on divisibility, greatest common divisor working knowledge of finding the remainder by using division algorithm and congruence 2 be able to solve linear congruences, congruent modulo prime power 3 be able to find the order of element of a group, order of finite group and normal subgroups, and also able to define a group and ring homomorphism.

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	<ol style="list-style-type: none">4 Be able to define rings, integral domain, fields, Euclidean domain and principle domain with exam,5 be knowledgeable of the examples of vector spaces and linear transformations, be able to relate matrices with linear transformation
Paper VI Differential equations and advanced dynamics	<p>The student should be able to:</p> <ol style="list-style-type: none">1. identify techniques for solutions of differential equations and also their applications in other branches of science besides mathematics.2. Form partial differential equation and to find the solution of first order partial differential equations for some standard types.3. find the moment of inertia of a rod, rectangular lamina, circular lamina and a triangular lamina4. solve problems using conservation of angular momentum5. understand the motion of a particle under the action of central force
Paper VII Advanced Calculus	<p>The student should be able</p> <ol style="list-style-type: none">1. to relate continuity of a function and the existence of Riemann integral2. To understand the continuity, differentiability and integrability of integrals as functions of parameters3. to evaluate double integral, triple integrals and change of order of integration4. to understand the basic properties of Euclidean space, open sets, closed sets and interior points.5. to find partial derivatives, directional derivatives and total derivatives of a function of several variables
Paper VIII Operations Research	<p>The student should be able:</p> <ol style="list-style-type: none">1. To analyze a problem and arrive at a mathematical formulation using which the problem can be tackled by the graphical method2. To solve a linear programming problem of more than two variables by simplex method3. To solve a two person zero sum game with saddle points and without saddle points4. To find the graphical solution of $2 \times n$ and $m \times 2$ games. To reduce the game problem to a linear programming problem.5. To understand state transition matrix, construction of a state transition matrix and n-step transition matrix

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DEPARTMENT OF BOTANY

Course Name	Course Outcome/s
Paper I Algae, Bryophyte and Pteridophytes	The paper will enable students to learn about Vegetative and Reproductive structures, Pigmentation, Food Reserves of Algae, Fungi and their economic importance. Understand the Morphological Diversity of Bryophytes and Pteridophytes.
Paper II Gymnosperms, Paleobotany, Morphology and Anatomy	The paper will enable students to know about Gymnosperms, the earlier plants, the scope of Paleobotany, types of Fossils its role in Geological time scale.
Paper III Angiosperm, Taxonomy, Economic Botany, Ethnobotany and Phytogeography	The paper will enable students to know the concept of methodology in taxanomy, know the floral variations in angiospermic families, their phylogeny and evolution. The economic importance of Plants and Plants products and their chemical contents, and the in-depth knowledge about different vegetations in the world.
Paper IV Microbiology, Mycology and Plant Pathology	The paper will enable students to know about different types of microorganisms, morphology and their uses and about plant diseases and their control measures.
Paper V Plant Physiology and Biochemistry	The paper will enable students to know about plant physiological processes, biochemical nature of cells, types and interaction in biomolecules, concept of enzyme activity and inhibition. And also to understand the movement, translocation of nutrients and absorption of water in plant bodies.
Paper VI Ecology and Conservation Biology	The paper will enable student to know about different ecological factors, ecological adaptations, population ecology, population interactions and community ecology. Students will also learn about structural and functional attributes of ecosystem and biochemical cycles.
Paper VII Genetics, Plant Breeding and Molecular Biology	This will enable students to learn about cell division, chromosome structure, Mendel's Laws of inheritance, structure of DNA and RNA, mechanism of DNA replication and transcription, learn about the techniques of production of new superior crop varieties and modern strategies applied in Genetics and plant breeding for crop improvement.
Paper VIII Plant Reproductive Biology and Plant Biotechnology	The paper will enable students to know about Reproductive Biology, cell and Tissue culture techniques, concept of Genetic engineering and its application, Crop biotechnology and introductory Bioinformatics


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DEPARTMENT OF ZOOLOGY:

Course Name	Course Outcomes
1A & 1B Systematics, Animal Diversity and Evolution	Both these theory and practical papers touch upon systematics, animal diversity and evolution. The Course outcome (CO) is that the students would have understood the concept of organic evolution that has led to animal diversity and adaptation. With this background they would understand the usefulness of systematics in the identification, nomenclature and classification of animal diversity.
2A & 2B Cell Biology and Genetics	Both these theory and practical papers touch upon cell biology and genetics. The CO is that the students would have a deeper glimpse into the structure and functions of a living cell and how genetics plays an important role in organic evolution, adaptation and inheritance of various traits including genetic disorders.
3A & 3B Animal Physiology, Endocrinology and Biochemistry	Both these theory and practical papers touch upon animal physiology, endocrinology and biochemistry. The CO is that the students would have learned the structures and functions of various organs and their organized systems to help a living organism thrive in its environment. The students are expected to have gained considerable knowledge about the role of various chemicals and hormones in the biochemistry that controls the living systems of an organism.
4A & 4B Developmental Biology, Ecology and Economic Zoology	Both these theory and practical papers touch upon developmental biology, ecology and economic zoology. The course outcome (CO) is that the students would have understood the living process of reproduction and development for the continuity of various species on this planet. These papers also help students in understanding ecology as an essential subject in today's world where harsh consequences like climate change and role of genetically modified organisms cannot be ignored. Economic zoology should have aroused the students to ponder upon the importance of various useful and destructive organisms from honeybees to cattle, and viruses, mosquitoes to poisonous snakes!
5A & 5B Functional Anatomy, Zoogeography and Adaptations	Both these theory and practical papers touch upon functional anatomy, zoogeography and adaptations. The Course outcome (CO) is that the students would have further gained more insights into the functional anatomy of various groups of animals – both invertebrate and vertebrate – in relation to their modes of living. They are expected to understand (i) the spatial distribution of various groups of animals in different landmasses across the globe, and (ii) the various adaptations necessary to help these animals survive and thrive in various niches of all sorts of habitats – aquatic, desert, terrestrial down to the deepest sea floor.


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6A & 6B Cell and Molecular Biology and Genetics	Both these theory and practical papers touch deeper upon cellular, molecular biology and genetics in addition to what the students had learned in Papers 2A and 2B during the 2nd semester. The Course outcome (CO) is that the students would have understood the genome organization, including various types of genes and genetic disorders. These papers cover the concept of immunity as well as the principles and applications of certain useful biological techniques.
7A & 7B Biochemistry Animal Physiology and Endocrinology	Both these theory and practical papers are further extension to biochemistry, animal physiology and endocrinology in addition to what the students had already learned in Papers 3A and 3B during the 3rd semester.
8A & 8B Developmental Biology, Ecology and Environmental Biology and Biotechnology	Both these theory and practical papers touch upon developmental biology, environmental biology and biotechnology. These papers further cover further extension to what the students had already learned in papers 4A and 4B during their 4th semester. The Course outcome (CO) is that the students would have further improved upon their theoretical understanding on these topics and practical skill too. To top it all an evolving biotechnology has been added to keep the students updated in this new useful field of research and application. Ethical issues and biosafety regulations are highly appropriate additions in theory paper whereas field trip study in the last practical paper.

DEPARTMENT OF COMMERCE:

Course Name	Course Outcomes
Programme Outcome	This program could provide trained professionals for the Industries, Banking Sectors, Insurance Companies, Financing companies, Warehousing etc., to meet the well trained manpower requirements. The graduates will get hands on experience in various aspects acquiring skills for Marketing Manager, Selling Manager, Over all Administration abilities of the Company.
Programme Specific Outcome	The students should possess the knowledge, skills and attitudes during the end of the B.com degree course. By virtue of the training they can become an Manager, Accountant , Management Accountant, cost Accountant, Bank Manager, Auditor, Teacher, Stock Agents, Government jobs etc.,
SEMESTER -1	


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Financial accounting	On successful completion of this course the students are enabled with the Knowledge in the practical applications of accounting.
Principles and Practice of Management	On successful completion of this course, the students should have understood Principles & functions of Management, Process of decision making, and Modern trends in management process.
Business Environment	To familiarize with the nature of business environment and its components. The students will be able to demonstrate and develop conceptual framework of business environment and generate interest in international business.
SEMESTER- II	
Indian Financial Service	<i>After completion of this course, the student will be able to Understand the role and function of the financial system</i>
Information Technology	To help the graduates to take up responsibilities in production, testing, designing and marketing in the information technologies and contribute for the growth of industry.
Business Economics	The objective of this paper is to make the student to understand how the business organizations work by applying economic principles in their business management.
SEMESTER-III	
Corporate Accounting	To enable the students to be aware on the Corporate Accounting in conformity with the provision of the Companies Act. Objectives: After the successful completion of the course the student should have a thorough knowledge on the accounting practice prevailing in the Corporate. To teach the basic concepts and real life procedures in company accounts.
Business Laws	To inculcate knowledge on various laws relating to business such as law of contract, law of sale of goods, law of agency, Negotiable Instruments Act etc.
Business Statistics	To familiarize the students with fundamental statistical tools which can help them in analysing the business data. To Identify statistical tools needed to solve various business problems. To Compute measures of location and dispersion. To Apply discrete and continuous probability distributions to various business problems. To Develop the skill of performing the calculations needed for various methods of analysis.
SEMESTER-IV	

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Financial Management	On Successful Completion of this subject, the students should have understood the functions of Finance, Cost of capital, Capital structure, Capital Budgeting, Working Capital Management
Principles of Auditing	To familiarize the students with the principles and procedure of auditing and to enable the students to understand the duties and responsibilities of auditors and to undertake the work of auditing.
MIL/ Alt. English	To familiarize the students with deep knowledge of different languages.
SEMESTER-V	
Cost Accounting	To acquaint the students with different methods and techniques of costing and to enable the students to identify the methods and techniques applicable for different types of industries.
Financial Service	Students will understand the operations and structure of different financial institutions
English For Commerce	To enable the students to draft business letters for different purposes
SEMESTER-VI	
Taxation – Law and Practice	Enable the student to understand the Principles of Direct and Indirect Taxes Calculation of Tax, Tax Authorities, Procedures
Entrepreneurship Development	To develop entrepreneurial spirit among students and to empower students with sufficient knowledge to start up their venture with confidence
Environmental studies	To understand key concepts from economic, political, and social analysis as they pertain to the design and evaluation of environmental policies and institutions and also to Understand core concepts and methods from ecological and physical sciences and their application in environmental problem-solving.


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