

COURSE OUTCOME

DEPARTMENT OF BCA

Sl.No	Course	Course outcome
1	BCA101/ English Language & Communication Skills	<ul style="list-style-type: none"> • Mastering the art of a professional business presentation • Distinguishing different communication process and its practical application • More effective written communication • To sensitize students to the aesthetic, cultural and social aspects of literature.
2	BCA102/ Mathematics-I (Bridge Course)	<ul style="list-style-type: none"> • Reason mathematically about basic discrete structures such as numbers, sets, used in computer science. • Familiarity with Determinant and Matrices. • Formulate Limit, Continuity and Differentiability. • Demonstrate a working knowledge Definite and Indefinite Integrals.
3	BCA103 / Introduction to Information Technology & BCA103P (Practical)	<ul style="list-style-type: none"> • Familiarity with parts of computer · • Understand the input and output devices. • Basic ideas of storage devices, computer Networks and Operating System.
4	BCA104 / Digital Computer Fundamentals	<ul style="list-style-type: none"> • Perform conversions among different number systems, became familiar with basic logic gates and understand Boolean algebra and simplify simple Boolean functions by using basic Boolean properties & design of combinational circuits such as MUX, DEMUX, Encoder and Decoder etc. • Understand the design of sequential Circuits such as Flip-Flops, Registers, and Counters. • Obtain a basic level of Digital Electronics knowledge and set the stage to perform the analysis and design of Complex Digital electronic Circuits
5	BCA105/ Programming Language through C & BCA105P (Practical)	<ul style="list-style-type: none"> • Analyze a given problem and develop an algorithm to solve the problem · • Improve upon a solution to a problem · • Use the 'C' language constructs in the right way · Design, develop and test programs written in 'C' · • Understand the basic terminology used in computer programming · Write, compile and debug programs in C language. • Use different data types in a computer program. • Design programs involving decision structures, loops and functions. • Explain the difference between call by value and call by reference · Understand the dynamics of memory by the use of pointers and Structures.
6	BCA204 / System Analysis and Design	<ul style="list-style-type: none"> • Students will be able to understand the steps in Software • Students will be able to understand the steps in Software

		Development. · Know the tools for System Analysis and Design.
7	BCA203 / Data Structure using C & 203P (Practical)	<ol style="list-style-type: none"> 1. Students develop knowledge of basic data structures for storage and retrieval of ordered or unordered data. Data structures include: arrays, linked lists, binary trees, heaps, and hash tables. 2. Students develop knowledge of applications of data structures including the ability to implement algorithms for the creation, insertion, deletion, searching, and sorting of each data structure.
8	BCA205 / Accounting and Financial Management & 205P (Practical) Tally ERP 9.0	<ul style="list-style-type: none"> • Define book keeping and accounting • Explain the general purposes and functions of accounting. • Explain the differences between management and financial accounting. • Describe the main elements of financial accounting information- assets, liabilities revenue and expenses
9	BCA301/ Management Information Systems	<ul style="list-style-type: none"> • Explain complex software within the context of business user needs through training presentation and written documentation • Distinguish relationships between programming language and information system • Determine factors influencing the strengths and weaknesses of the most common computer operating system and determine how one would be prefer over others.
10	BCA303/ Operating Systems & BCA303P (Practical)	<ul style="list-style-type: none"> • To make students able to learn different types of operating systems along with concept of file systems and CPU scheduling algorithms used in operating system. • To provide students knowledge of memory management and deadlock handling algorithms. • At the end of the course, students will be able to implement various algorithms required for management, scheduling, allocation and communication used in Operating System.
11	BCA304 / Object Oriented Programming in C++ & BCA304P (Practical)	<ul style="list-style-type: none"> • Be able to understand the difference between object oriented programming and procedural oriented language and data types in C++. • Be able to program using C++ features such as composition of objects, Operator overloading, inheritance, Polymorphism etc. • At the end of the course students will able to simulate the problem in the subjects like Operating system, Computer networks and real world problems
12	BCA305 / Computer Organization and Architecture	<ul style="list-style-type: none"> • Understand the fundamentals of different instruction set architectures and their relationship to the CPU design. • Understand the principles and the implementation of computer arithmetic. • Knowledge about Primary and Secondary storage System. • Basic knowledge about parallel computer structure and Pipelining.
13	BCA401/ Environment and Ecology	<ul style="list-style-type: none"> • Apply the scientific method and quantitative technique to describe, monitor and understand environmental system. • Be proficient in ecological field methods such as wild life survey, biodiversity assessment , mathematical modelling and monitoring of ecological systems. • Effectively understand and convey scientific material from peer review sources.

14	BCA402 /Database Management Systems & BCA402P (Practical) Oracle Laboratory	<ul style="list-style-type: none"> • Gain a good understanding of the architecture and functioning of database management systems as well as associated tools and techniques, principles of data modeling using entity relationship and develop a good database design and normalization techniques to normalize a database. • Understand the use of structured query language and its syntax, transactions, database recovery and techniques for query optimization. • Acquire a good understanding of database systems concepts and to be in a position to use and design databases for different applications.
15	BCA403 / Computer Networking	<ul style="list-style-type: none"> • To explain how communication works in computer networks and to understand the basic terminology of computer networks • To explain the role of protocols in networking and to analyze the services and features of the various layers in the protocol stack. • To understand design issues in Network Security and to understand security threats, security services and mechanisms to counter.
16	BCA404 / Software Engineering	<ul style="list-style-type: none"> • Select and implement different software development process models. • Extract and analyze software requirements specifications for different projects. • Develop some basic level of software architecture/design. • Apply standard coding practices. • Define the basic concepts and importance of Software project management concepts like cost estimation, scheduling and reviewing the progress. • Identify and implement of the software metrics. • Apply different testing and debugging techniques and analyzing their effectiveness.
17	BCA405 / GUI Programing & BCA405P (Practical) VB 2010 with Mini Project	<ul style="list-style-type: none"> • To learn how to take a problem, figure out the algorithm to solve it, the write the code. • Design, develop and test Java programs using classes, methods, conditionals, loops, etc. • Creating a visual program to solve a problem. Interpreting a series of instructions used in a visual program. • Identifying the basic structures of program (sequence, decision, and repetition). • Develop substantial Java programs, when appropriate reusing previously created classes, writing programs requiring three or more classes.
18	BCA501/ Introduction to Java Programming & BCA501P (Practical)	<ul style="list-style-type: none"> • Understanding of the principles and practice of object oriented construction of robust, maintainable programs which satisfy their requirements; • Ability to implement, compile, test and run Java programs comprising more than one class, to address a particular software problem. • Demonstrate the principles of object oriented programming;

		<ul style="list-style-type: none"> • Demonstrate the ability to use simple data structures like arrays in a Java program. • Understand the concept of package, interface, multithreading and File handling in java. • Ability to make use of members of classes found in the Java API (such as the Math class).
19	BCA502 Computer Graphics and Multimedia	<ul style="list-style-type: none"> • Understand the basics of computer graphics, different graphics systems and applications of computer graphics. • Discuss various algorithms for scan conversion and filling of basic objects and their comparative analysis. • Use of geometric transformations on graphics objects and their application in composite form. • Extract scene with different clipping methods and its transformation to graphics display device.
20	BCA503/ Microprocessors & BCA503P (Practical) Assembly Language Programming	<ul style="list-style-type: none"> • Introduction to the Architecture and programming of the microprocessor 8085 • Demonstrate programming using the various addressing modes and instruction set of 8085 microprocessor • Design structured, well commented, understandable assembly language programs to provide solutions to real world control problems.
21	BCA504 / Software Project Management	<ul style="list-style-type: none"> • Generate project schedule and can construct, design and develop network diagram for different type of Projects. They can also organize different activities of project as per Risk impact factor.
22	BCA5E1/ Introduction to e-Governance	<ul style="list-style-type: none"> • Gain a familiarity with the basic concepts, terminology and technology of e-commerce/e-government. ♣ Develop skills to critically evaluate government web sites and e-services against current “best practice” principles and standards. ♣ Understand the major federal and state laws and regulations impacting the evolution of e-government. ♣ Be able to articulate the policy and social issues facing agencies in implementing e-government initiatives. ♣ Be able to apply basic business case and government IT management concepts in preparing e-government proposals, plans or strategies.
23	BCA6E4/ IT Acts and Cyber Laws	<ul style="list-style-type: none"> • The course deals with all the aspects of Cyber law as per Indian/IT act 2008. It also covers overview of Intellectual Property Right and Trademark Related laws with respect to Cyber Space. • Demonstrate a critical understanding of the Cyber law with respect to Indian IT/Act 2008 ☒ Describe laws governing cyberspace and analyze the role of Internet Governance in framing policies for Internet security ☒ Discuss different types of cybercrimes and analyze legal frameworks of different countries to deal with these cybercrimes ☒ Explain the importance of jurisdictional boundaries and identify the measures to overcome cross jurisdictional cyber crimes

24	BCA6E6/ Internet and e-Commerce	<ol style="list-style-type: none"> 1. Demonstrate an understanding of the foundations and importance of E-commerce 2. Demonstrate an understanding of retailing in E-commerce by: <ol style="list-style-type: none"> 1. analyzing branding and pricing strategies, 2. using and determining the effectiveness of market research 3. Analyze the impact of E-commerce on business models and strategy 4. Describe Internet trading relationships including Business to Consumer, Business-to-Business, Intra-organizational. 5. Describe the infrastructure for E-commerce 6. Describe the key features of Internet, Intranets and Extranets and explain how they relate to each other. 7. Assess electronic payment systems 8. Recognize and discuss global E-commerce issues
25	BCA601P/ PROJECT WORK	<ul style="list-style-type: none"> • Students should be able to design and construct a hardware and software system, component, or process to meet desired needs. • Students are provided to work on Multidisciplinary Problems. • Students should be able to work as professionals, with portfolio ranging from data management, network configuration, designing hardware, database and software design to management and administration of entire systems.

DEPARTMENT OF BOTANY

Sl.No	Course	Course outcome
1	Bot/1/CC/01: Cryptograms	To make the student get awareness and study the depth about fungi, algal, bryophytes and pteridophytes. To give information about lower plants and their life cycle.
2	Bot/11/CC/03: Phanerogams	Interpret the performance characteristics and life cycle and the diversity of plant biology of seed plants.
3	Bot/111/CC/05: Plant physiology, biochemistry, ecology	Understanding the plant and water relation, process of photosynthesis and respiration Familiarised with the environmental concept Knowledge about the function and molecular components within the plants.
4	Bot/1V/CC/07: Microbiology, Cytology, Genetic, Evolution	To get awareness of different micro organisms and its importance and the harmful effects. Structure organisation of cell membranes and membranes models. To understand different types of genetic interaction. Aware the student to understand evolution and its importance.

5	Bot/V/CC/09: Fungi, Plant pathology, Biostatistics	Detail study of the different types of fungal diseases and symptoms in plants and its prevention and control measures Application of statistical method to solve problems
6	Bot/V/CC/11: Algae, Lichen, Bryophytes	Interpret the performance characteristics and life cycle of various lower plants.
7	Bot/V/CC/13: Cytogenetics, Plant breeding, bioinformatics	Understanding the functions of chromosomes in the genetic study of genes, genetic variations and hereditary in living organisms. The course helps students to apply basic technique in plant breeding bioinformatics may help students to analyse the basic biological data.
8	Bot/V/CC/15: Environmental biology, ethnobotany	Deals with modern conservation of biology under natural conditions. knowing the importance of plants and its products also the economical uses.
9	Bot/V/CC/17: Pteridophytes, Gymnosperms, paleobotany, palynology.	Understanding the morphological diversity basic taxonomy evolution and general characteristics of the plants. To understand plant spores and pollen in both living and fossil form.
10	Bot/V1/CC/19: Angiosperm taxonomy, Anatomy, Embryology	Know the concept of methodology in taxonomy to study internal structure and developmental pattern of the plant To know fertilization, endosperm and embryogeny the scope and its importance.
11	Bot/V1/CC/21: plant metabolism, biochemistry, thermodynamics.	They will learn the nucleic acid metabolism and understand the protein biosynthesis of amino acid. Lipid metabolism and significances in plants Understand the basic concept of energy changes in biological system
12	Bot/V1/CC/23: Biotechnology, Experimental embryology	Gain knowledge about the mechanism in DNA replication, fundamentals of recombinant DNA technology and genetic engineering. To understand the principle and basic protocol for plant tissue culture.

DEPARTMENT OF CHEMISTRY

Paper	Course	Course Outcome
I (T)	CHEM/1/CC/111 Inorganic chemistry-I	Atomic structure, Periodic properties, Redox reactions, Chemical bonding (basic idea, concept of hybridization, VSEPR theory, shapes of molecules, hydrogen bonding), Co-ordination chemistry (Ligands, Werner's theory, EAN, chelates, isomerism in co-ordination compounds, stereochemistry of complexes), Nuclear chemistry and radioactivity.
I (P)	CHEM/1/CC/111P Practical (Inorganic chemistry-I)	Qualitative analysis of inorganic mixtures, titrimetric analysis, acid-base titrations
II (T)	CHEM/2/CC/121 Organic chemistry-I	Electron displacement effects in organic molecules and the basic concept of reaction mechanism, Arenes and aromaticity, Aldehydes and ketones (structure and reactivity of carbonyl group, mechanism of nucleophilic additions and addition-elimination reactions, carboxylic acids and derivatives), Amines (aliphatic and aromatic), Nucleophilic substitution reactions and elimination reactions.
II (P)	CHEM/2/CC/121P Practical (organic chemistry-I)	Systematic qualitative analysis of organic molecules containing one functional group and preparation of derivatives
III (T)	CHEM/3/CC/231 Physical chemistry-I	Gaseous state (Kinetic molecular model of gas, derivation of kinetic gas equation, compressibility factor, Vander Waals equation of state, law of corresponding states), Liquid state (vacancy theory of liquid physical properties of liquids, liquid crystals), Colloids and surface chemistry (classification and preparation of colloids, Optical properties of colloids, adsorption, molar enthalpy, adsorption isotherms), Dissociation equilibria (dissociation equilibria of weak electrolytes, ionic product of water, buffer solutions, Henderson-Hasselbach equations for acidic and basic buffers), Thermodynamics (second law of thermodynamics, Carnot's cycle, concept of entropy, entropy change for reversible and irreversible processes)
III (P)	CHEM/3/CC/231P Practical (Physical chemistry-I)	Determination of surface tension, coefficient of viscosity, water equivalent of a calorimeter, heat of neutralization of a strong acid with strong base. Study of heat of dilution and determination of strength of an unknown acid.
IV (T)	CHEM/4/CC/241 Analytical chemistry-I	Safety and hygiene in the chemistry laboratory, Qualitative analysis (common ion effect, application of solubility product and common ion effect, interfering anions and their removal, group separation), classical separation methods (theories of distillation, fractional distillation, sublimation, solvent extraction, separation of mixtures, Craig method), Evaluation of experimental data (significant figures, types of errors, accuracy and precision, statistical treatment of analytical data, test of significance, F-test and t-test), Volumetric analysis (analyte, titrant, equivalence point, indicator, primary and secondary standards acid base titration, redox titration, iodometric and iodimetric titrations, theory of acid-base indicators), Gravimetric methods (theory of precipitation, co-precipitation, post-precipitation, fractional precipitation, use of organic reagents)

		in inorganic analysis).
IV (P)	CHEM/4/CC/241P Practical (Analytical chemistry-I)	Determination of indicator constant, Beer's law- determination of concentration, determination of pH of a given solution, dissociation constants of weak acid, base. Determination of pH of a given buffer, to titrate HCl solution against NaOH solution potentiometrically to determine concentration of HCl in a solution.
V (T)	CHEM/5/CC/351 Inorganic chemistry-II	Chemical bonding (ionic solids, packing of ions in crystals, types of sites. Lattice energy, Born-Haber cycle, salivation energy, defects in crystals, semiconductors), Molecular Orbital theory-pictorial representation, MO diagrams of homonuclear and heteronuclear diatomic molecules, chemistry of s and p block elements, acid base concept, non-aqueous solvents, molecular symmetry, transition elements, Valence bond theory, crystal field theory, crystal field splitting.
V (P)	CHEM/5/CC/351P Practical (Inorganic chemistry-II)	Inorganic preparations, quantitative (gravimetric) analysis- estimation of nickel (II) using dimethylglyoxime, estimation of sulphate as barium sulphate, estimation of iron as Fe_2O_3
VI (T)	CHEM/5/CC/352 Organic chemistry-II	Stereochemistry of organic molecules (geometrical isomerism and optical isomerism, sequence rule, R & S system of nomenclature), Conformational isomerism, Heterocycles (pyrrole, furan thiophene, indole, quinoline, isoquinoline), Active methylene compounds, Name reactions (Friedel-Crafts, Knoevenagel, Michael, Wittig, Reformatsky, Claisen-Schmidt and Mannich reaction), Molecular rearrangements (pinacol-pinacolone, Wagner-Meerwein, dienone-phenol, Bechmann Wolff, Hofmann, Benzil-Benzilic acid and Claisen rearrangements)
VI (P)	CHEM/5/CC/352P Practical Organic chemistry-II	Organic preparations (Phthalimide, m-dinitrobenzene, picric acid, benzoic acid, aspirin), Organic separation (separation of binary organic mixtures, determination of melting points.
VII (T)	CHEM/5/CC/353 Physical chemistry-II	Gaseous state (Maxwell's distribution law, rms, average kinetic energy, degrees of freedom, solid state (laws of crystallography, Miller indices, symmetry elements in crystals, seven crystal systems, Bragg's equation), chemical kinetics and catalysis, Thermodynamics (third law, Nernst heat theorem, absolute entropy, Gibbs and Helmholtz energy), thermodynamics of open system, Electrochemistry (electrical conductance, specific, equivalent and molar conductivity, Kohlrausch's law, Arrhenius theory, Ostwald's dilution law, Debye-Huckel-Onsager equation, ionic mobility)
VII (P)	CHEM/5/CC/353P Practical Physical chemistry-II	Determination of solubility, heat of solution, strength of ferrous sulphate solution potentiometrically, determination of velocity constant, conductometric titration of weak acid and strong base, strong acid and weak base.
VIII-B(T)	CHEM/5/OP/354B Industrial chemistry (optional paper)	Fertilizer (essential nutrients, nitrogenous fertilizers- calcium superphosphate, phosphate slag, potash fertilizers), Cement (composition, raw materials, manufacture and setting), Glass (raw materials, manufacture, variety), Fermentation technology and food technology, Leather industry (curing, preservation, tanning and tannery effluents), Chemical explosives (chemistry of lead azide, nitroglycerine, nitrocellulose, TNT, dynamite, cordite, picric

		acid, gun powder, introduction to rocket propellants), Coal and petroleum, Polymer industry, textile industry.
IX (T)	CHEM/6/CC/361 Inorganic chemistry-III	Organometallic compounds – alkyls and aryls of Mg, boron and tin, Metal carbonyls, Bioinorganic chemistry (metalloporphyrins, role of myoglobin and haemoglobin in biological systems, metalloenzymes, Inorganic polymers- types and general properties, silicones and polyphosphonitrilic chlorides, Lanthanides and actinides, Magnetochemistry (magnetic induction, permeability, intensity of magnetisation, magnetic susceptibility, dia and para magnetism, ferro and antiferromagnetism, Curie's law, Curie-Weiss law, Bohr magneton), Infrared spectroscopy, Raman spectroscopy.
IX (P)	CHEM/6/CC/361P Practical Inorganic chemistry-III	Complexometric titrations (estimation of Mg^{2+} , Ca^{2+} using EDTA, estimation of temporary, permanent and total hardness of water samples, Argentometry (estimation of Cl^- by Mohr's and Vohlard's method, Oxidation-reduction titrimetry.
X (T)	CHEM/6/CC/362 Organic chemistry-III	Organic photochemistry (excitation of molecules, Franck-Condon principle, Jablonski diagram, singlet-triplet states, photosensitization, quenching, fluorescence, phosphorescence, non-radiative processes, Norrish type-I and type-II reactions), Pericyclic reactions- electrocyclic reactions and cycloaddition reactions), Organometallic compounds, organosulphur compounds, , Green chemistry- principles, Green reactions with mechanism, microwave assisted organic reactions in water, green preparations (sonication reaction), Mass spectrometry, NMR spectroscopy.
X (P)	CHEM/6/CC/362P Practical Organic chemistry-III	Study of the absorbance spectra of $KMnO_4$ and $K_2Cr_2O_7$; study the pH-dependence of UV-Vis spectrum of $K_2Cr_2O_7$, determination of concentration of the given organic compound using UV-Vis spectrophotometer, Synthesis of heterocyclic compounds, Extraction of organic compounds.
XI (T)	CHEM/6/CC/363 Physical chemistry-III	Photochemistry (Grotthus-Draper law, Beer-Lambert's law, Stark-Einstein law, chemiluminescence), Quantum chemistry (black body radiation, Planck's radiation law, photoelectric effect, Schrodinger wave equation), Statistical thermodynamics (concept of distribution of energy, thermodynamic probability, Boltzmann distribution law ,partition functions), Molecular spectroscopy- Born- Oppenheimer approximation), Electronic spectroscopy, Rotational spectroscopy, Vibrational spectroscopy, Raman spectroscopy), Electrochemistry (chemical cells, Nernst equation, standard electrode potential, application of EMF measurements, concentration cells, liquid junction potential)
XI (P)	CHEM/6/CC/363P Practical Physical chemistry-III	Determination of partition coefficient, Verification of Beer-Lambert's law, study of adsorption of oxalic acid on activated charcoal and to verify Freundlich's adsorption isotherm, Preparation of colloidal sols.
XIIB	CHEM/6/CC/364B Natural Products	Terpenes- classification, biosynthesis, alkaloids- isolation, detection, Hofmann degradation, Stereochemistry of morphine and benzyl isoquinoline alkaloids, conformation of naturally

		occurring germacranolides, stereochemistry of rotenoids, abietic acid, menthol and vinblastine, Rearrangement reactions of morphine, Wesley-Moser rearrangement, papaverine, Nametkin rearrangement, biological significance of secondary metabolites, stereoselective synthesis of reserpine and paraconic acid, Biosynthesis of benzylisoquinoline alkaloids, isoflavones, reticuline.
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DEPARTMENT OF ENGLISH

Sl No	Course	Course Outcome
1	ENG/I/FC/I : ENGLISH I	Students should be able to : i) able to differentiate and understand the different Parts of Speech, Tense and Voice ii) understand Direct and Indirect Speech, and the concept of Concord iii) write a job application letter, a resume and reports and essays iv) communicate verbally in clear English
2	Elective Core Subject I : Course I	Students should be be able to: i) understand and analyze the history of English literature from Old English Period, Elizabethan period, 18 th century literature (with an emphasis on satire), 19 th century (the Romantic Age and Victorian Age) and 20 th century or modern literature. ii) develop working knowledge of the principal works, authors, genres and periods of English literature.
3	ENG/II/FC/2 : ENGLISH – II	Students should be able to : i) read, understand and analyze poems by Shakespeare, Donne, Keats and Yeats ii) understand short stories by Jim Corbett and Biakliana and Letter to my daughter by Jawaharlal Nehru
4	Elective Core Subject I : Course II	Students should be able to : i) understand and interpret “An Outline History of English” ii) understand the Place and Manner of Articulation iii) understand the Vowels, Consonants, Diphthongs, Clusters and Syllables iv) understand Transcription and Stress Patterns
5	ENG/III/FC/3 : Alternative English	Students should be able to : i) read, understand, interpret and analyze poems from Blake, Dickinson, Hardy and Ezekiel ii) understand and analyze shorts stories by R.K.Narayan, Nirad C.Chaudhuri and C.Thuamluaia

6	ENG/III/CC/3 : Poetry & Short Stories	Students should be able to : i) read, understand, interpret poems by Donne, Blake, Keats, Tennyson, Yeats and Eliot. ii) understand and interpret short stories by S.J.Duncan, Kaphleia, Sebastian Zumvii and Bimabati Thiym Ongbi.
7	ENG/IV/EC/4 : Fiction – I	Students should be able to : i) understand the term Fiction ii) understand, interpret and analyze works by Daniel Defoe, Emily Bronte, Hardy, Dickens and Forster
8	ENG/V/CC/5 : Drama –I	Students should be able to : i) understand drama as a genre of literature ii) understand, interpret and analyze works by Marlowe, Shakespeare, Sheridan and Dryden
9	ENG/V/CC/6 : Women’s Writings	Students should be able to : i) understand women’s writing as an important area of literary studies ii) understand, interpret and analyze works by Anita Desai, Charlotte Bronte, Virginia Wiilf, Arundhati Roy and Alice Walker
10	ENG/V/CC/7 : Literary Theory and Criticism	Students should be able to understand, differentiate Classical criticism, Medieval, Renaissance, English Neo Classical, Romantic, Victorian and 20 th Century Criticism
11	ENG/V/CC/8 : Fiction II	Students should be able to understand, interpret and analyze works by Henry James, Joseph Conrad, E.M.Forster William Golding and George Orwell
12	ENG/VI/CC/9: Indian Writing in English	Students should be able to : i) understand Indian writing in English as a body of work by writers in India ii) understand, interpret and analyze selected works by Mulk Raj Anand, Amitav Ghosh, Vijay Tendulkar, Mahesh Dattani and Girish Karnad
13	ENG/VI/CC/10 : Drama – II	Students should be able to understand, interpret and analyze selected works by G.B.Shaw, Henrik Ibsen, John Osborne, Harold Pinter and Samuel Beckett
14	ENG/VI/CC/11: Literary Criticism	Students should be able to understand, interpret and analyze selected works by Samuel Johnson, William Wordsworth, Matthew Arnold, T.S.Eliot and F.R.Leavis
15	ENG/VI/CC/12: American Literature	Students should be able to understand, interpret and analyze selected works by Ernest Hemingway, J.D.Salinger, Harper Lee, Arthur Miller and Tennessee Williams

DEPARTMENT OF EDUCATION

Sl.No	Name of course	Course outcome
1	Paper I; Psychological Foundations of Education	Educational Psychology and Development. Individual Differences and Mental Health. Intelligence and Creativity. Personality. Learning
2	Paper II; Philosophical and Sociological Foundations of Education	Introduction to Educational Philosophy. Some Major Schools of Philosophy and their contribution to present day Education. Introduction to Educational Sociology. Education and Change. Current Social Problems Relating to Education in India.
3	Paper III; Development of Education in India	Education in Ancient India. Education in Medieval India. Education in British India. Education in Independent India upto 1960s. Education in Independent India after 1960s and Development of Education in Mizoram.
4	Paper IV; Issues and Trends in Contemporary Indian Education	
5	Paper V; Research Methodology in Education	Fundamentals of Educational Research. Variables, Hypothesis and Literature Review. Sampling. Tools of Data Collection. Research Projects.
6	Paper VI; Statistics in Education	Fundamentals of Statistics. Measures of Central Tendency. Measures of Variability. Normal Distribution. Correlation.
7	Paper VII; Educational Evaluation	Measurement and Evaluation. Measuring Instruments. Tests. Standardisation of Tests. New Trends in Evaluation.
8	Paper VIII (optional A) ; Educational Technology (optional B) ; Educational Guidance and Counselling	(A) Introduction to Educational Technology. Communication in Teaching-Learning. Educational Objectives. Programmed Learning. Emerging Trends in Educational Technology.

		<p>(B) Concept and types of Guidance. Educational, Vocational and Personal Guidance.</p> <p>Job Analysis and Occupational Information.</p> <p>Student's Appraisal.</p> <p>Counselling</p>
9	Paper IX; Curriculum Development	<p>Concept and Function of Curriculum.</p> <p>Curriculum Construction.</p> <p>Foundations of Curriculum.</p> <p>Curriculum Evaluation.</p> <p>Curriculum Change.</p>
10	Paper X; Educational Planning and Management	<p>Educational Planning.</p> <p>Educational Management.</p> <p>Financial Management.</p> <p>Managerial Behaviour.</p> <p>Supervision.</p>
11	Paper XI; Development of Educational Thought	<p>Educational Thought and Practices in Ancient Important Societies.</p> <p>Educational Thought and Practices in Medieval Europe.</p> <p>Educational Thought of Indian Thinkers.</p> <p>Educational Thought of Western Thinkers.</p> <p>Modern Educational Thought and Practices.</p>
12	Paper XII; (Optional A)-Project Work (Optional B)- Pedagogy	<p>A: Initiation and Completion of the Project.</p> <p>General Structure of the Report.</p> <p>Chapter – I Introduction.</p> <p>Chapter II- Procedure Adopted/followed/Plan and Procedure.</p> <p>Chapter III- Analysis and Interpretation of Data.</p> <p>Chapter IV- Results and Discussion.</p> <p>B: Nature and Charecteristics of Teaching.</p> <p>Audio- Visual Aids.</p> <p>Lesson Plan and Dianostic Testing.</p> <p>Models and Methods of Teaching.</p> <p>Role and Function of a Teacher.</p>

DEPARTMENT OF PUBLIC ADMINISTRATION

Sl.No	Name of course	Course outcome
1	Course-I: Elements of Public Administration	On completion of the course, students are able to: <ol style="list-style-type: none">1. Understand the meaning, nature, scope and significance of public administration, evolution of the discipline, difference between public and private administration.2. Understand the different approaches to the public administration.3. Understand the concept and structure of organization, headquarters and field relations.4. Understand the various Principles and Forms of Organisation.5. Understand how control over public administration is exercised.
2	Course-II: Administrative Theory	On completion of the course, the students are able to: <ol style="list-style-type: none">1. Understand the meaning and significance of Administrative Theory and the general Ideas of Kautiyya, Karl Marx, and VI Lenin on State and Administration.2. Understand the classical theories of public administration like scientific management theory, Bureaucratic Organisation and theory of organizational principles.3. Understand the various neo-classical theories of public administration4. Understand the meaning and origin of behavioural theories of public administration.5. Understand the meaning and importance of comparative public administration.
3	Course-III: Public Administration in India	On completion of the course the student are able to:. <ol style="list-style-type: none">1. Understand the Constitutional settings of Indian Administration.2. Understand the Central Administration and important offices in Indian Administration.3. Have general knowledge about important Ministries in India.4. Have general information about the Administration of Union Territories, State and District administration.5. Have basic knowledge about major issues and institutions in Indian Administration.
4	Course-IV: Public Personnel Administration	On completion of the course, the student are able to: <ol style="list-style-type: none">1. Understand the concept, meaning, nature, scope of public administration and various types of personnel system.2. Understand the meaning and importance of recruitment and the main features of system of recruitment for All India, Central and State services.3. Understand the meaning and importance of Classification – rank and position classification.

		<ol style="list-style-type: none"> 4. Understand the meaning and importance of Conduct and Discipline and have general knowledge about conduct rules, disciplinary rules and rights of Civil Servants. 5. Understand the meaning and importance of retirement, its features and forms and the various retirement benefits of an employees.
5	Course-V: Bureaucracy and Development	<p>On completion of the course, the student are able to:</p> <ol style="list-style-type: none"> 1. Understand the concept, elements and types of bureaucracy and the ideas of Karl Marx and Max Weber on bureaucracy. 2. Understand how bureaucracy in India operates during British period and post Independent era. Acquire knowledge about the Indian Administrative Service, Indian Police Service and Indian Forest Service. 3. Understand the concept and dimensions of development , meaning, nature and scope of development administration and its differences from the traditional administration. 4. Understand the relationship between Bureaucracy and Development. 5. Understand the trends in development in Development and Bureaucracy.
6	Course-VI: Local Self Government in India	<p>On completion of the course, the student are able to:</p> <ol style="list-style-type: none"> 1. Understand the meaning, characteristics and importance of local government. 2. Understand the genesis and evolution of local government in India and how the 73rd and 74th constitutional amendments affects and strengthens the local governments in India. 3. Understand the urban local government and functions of different urban local bodies. 4. Understand the different rural local bodies and their functions. 5. Understand the Legislative, Administrative and financial relations between the State Administration and local government institutions. Understand role and powers and functions of State Finance Commission.
7	Course-VII: Economic Administration	<p>On completion of the course, the student are able to:</p> <ol style="list-style-type: none"> 1. Understand the meaning, scope and importance of economic administration, New Economic Policy-liberalization, privatization and globalization. 2. Understand the meaning and importance of Planning, Plan formulation at the National, State and local level and different planning bodies in India. 3. Understand the forms, features and management of Public undertakings, different Industrial Policy Resolutions and Impact of New Economic Policy. 4. Understand the meaning, Principles and types of Budget and its preparation.

		5. Understand the reforms in Indian economy especially in agricultural sector. Co-operative movement and public-private partnership in economic development.
8	Course-VIII (A): Social Welfare Administration	<p>On completion of the course, student are able to:</p> <ol style="list-style-type: none"> 1. Understand the meaning, scope and importance of social welfare administration and important concepts of social welfare administration. 2. Understand different social problems – unemployment, Juvenile Delinquency, Drug addiction etc., different social legislation – Juvenile Justice Act, Domestic violence Act etc. 3. Understand the meaning and importance of social planning and the role and functions of Government and Voluntary Agencies. 4. Understand the organization and functions of Central Social Welfare Board and State Social Welfare Board and their relationship. 5. Understand the meaning and needs of Personnel for Social Welfare Personnel and the creation of a Special Cadre for Social Welfare Personnel.
9	Course-IX: Political and Administrative Institutions in the Hill Areas of North East India	<p>On completion of the course, the student are able to:</p> <ol style="list-style-type: none"> 1. Understand the geographical location and importance of North-East India, British Annexation of N.E India and its impact, Constitutional status of Mizoram under the Government of India Acts 1919 and 1935. 2. Understand the Political and Administrative Institutions at the grassroot level in the pre and post Independence Period- their powers and functions. 3. Understand the sixth Schedule of the Constitution and Administration of the Autonomous District council in Mizoram and Meghalaya; Organisation, power and function of the District and Regional Councils and their relations with the State Government. 4. Understand the District Administration in Mizoram and Meghalaya in pre and post Independence era. The creation of the States of Meghalaya and Mizoram. 5. Understand the Constitutional and Administrative instruments for the N.E.India like Inner Line Regulation, Mizoram Peace Accord, and Planning machinery at the State and District level and North Eastern Council (NEC).
10	Course-X: Administration of United Nations	<p>On completion of the course, the student are able to:</p> <ol style="list-style-type: none"> 1. Understand the meaning and evolution of International Organisation. League of Nations-Its origin and causes of failure. 2. Understand the Evolution and development, purposes and principles of the United Nations. 3. Understand the structure and functions of the UN-General Assembly, Security Council, ECOSOC, Secretariat and International Court of Justice.

		<ol style="list-style-type: none"> 4. Understand the functioning of the Specialised agencies of UN- ILO, WHO, IMF, IBRD, World Bank. 5. Understand the meaning and development of International Civil Service, Power and functions of the Secretary General of the UN, Financial Administration of the UN.
11	Course-XI: Office Management in Government	<p>On completion of the course, the student are able to:</p> <ol style="list-style-type: none"> 1. Understand the meaning and functions of Office Management, its structure and importance in Government. 2. Understand the meaning, aims and objectives of Office lay out in Government; office furnishing 3. Understand the procedure of working in Government Office ; filling and office records; official Communication; Official Reports. 4. Understand office Personnel Management – Human Resource Management; Financial Management – Preparation of Financial sanction; Office Conduct, Discipline and Supervision. 5. Understand office Automation, use of Computer and Internet in Government Office; e-governance; challenges and prospects of Office Automation.
12	Course-XII(B) : Rural and Tribal Development Administration	<p>On completion of the course, the student are able to</p> <ol style="list-style-type: none"> 1. Understand the concept , nature and measures of level of rural development, socio-economic and political context: Rural Economy and its contribution to National Economy: Institutional Framework for Rural Development. 2. Understand Rural Development Policies – needs and goals; National Agriculture Policy, Land Reforms Policy; Role of Panchayati Raj System in Rural Development. 3. Understand Indian Tribes – demographic, cultural and geographical characteristics; Tribes Advisory Council; Constitutional Provisions, Policies and Approaches to Tribal Development, in India. 4. Understand Institutional framework for Tribal Development – Central, State and Local; Specialised Agencies – National Commission for Scheduled Tribes, Programmes For Tribal Development in India. 5. Understand problems to Tribal Areas and Tribal Community – Land Alienation, Indebtedness and Economic Bondage, Cultural Identity Crises, Socio-political Movements and Tribal Development.

DEPARTMENT OF PHYSICS

Semester	Courses	Outcomes
1st	1. Properties of Matter, Oscillations & Acoustics. 2. Laboratory-I	The students gain the knowledge to learn motion of bodies and sound waves. They also acquire the basic knowledge of mechanics, properties of matter especially knowledge of elasticity, viscosity and surface tension. Courses also cover gravitation and the conservation of rotational motion. The syllabuses also teach to use methods for solving differential equation and experience the diverse application of the wave equation. This course will provide a theoretical basis for doing experiments in related areas of Laboratory-I.
2nd	1. Thermodynamics & Mathematical Physics-I. 2. Laboratory-II	These courses are arranged to provide the students to understand the principle of calorimetry, laws of Thermodynamics and also the concepts of entropy. It also provides the information to learn the behaviour of real gas, ideal gas and thermal conductivity and diffusivity. The mathematical physics are designed to acquire the knowledge of details study of scalars, vectors, tensors and matrices, Beta and Gamma function. The laboratory experiments are designed in accordance with the theory.
3rd	1. Electromagnetism and Optics. 2. Laboratory-III	The course aims to provide knowledge about the electrical energies to learn motion of charges, acquire basic knowledge of magnetic properties, gives the knowledge about the alternating current and its circuits. The course also provide necessary foundation in optics, provide knowledge of the behaviour of light covering the very important and fascinating areas of interference, diffraction and polarization with many experiments associated with it. The laboratory experiments are designed in accordance with the theory.
4th	1. Atomic, Nuclear Physics -I and Solid State Physics-I. 2. Laboratory-IV	The course is intended to provide a detailed study of atom, the impact of magnetic field in spectra, behaviour of atoms in various states and the application of observed theories. The course also provides the knowledge to study the structure of nucleus, formation of nucleus and their binding energy, the energy released by the nucleus during the fission and fusion process. The basic knowledge of Solid State Physics is also introduced in this course. The laboratory experiments are designed in accordance with the course.

<p>5th</p>	<ol style="list-style-type: none"> 1. Mathematical Physics-II 2. Electronics-I 3. Classical Mechanics and Nuclear Physics-II <p>Optional I (any one)</p> <ol style="list-style-type: none"> 4. Atomic and Molecular Spectroscopy 5. C-Language and Num. Methods 6. Laboratory-V 7. Laboratory-VI 8. Laboratory-VII 9. Laboratory-VIII 	<p>From this semester the course is designed for Physics Major (core) students. It includes Four(4) Theory papers and Four (4) Practical papers. The Mathematical Physics cover the advanced courses which are useful for the solution of solving problems in different branches of physics. The courses are designed to learn all the electronic components and their working principles. This course is intended to provide theoretical and practical knowledge about electronics. The course also provides the conceptual terminology used in Classical mechanics. It connects concepts and mathematical rigor in order to enhance understanding. This course is intended to introduce principles of spectroscopic studies which are central to the development of Quantum mechanics and study of atoms and molecules. C programming is introduced in the courses, enables the students to develop computer programmes which can solve mathematical equations. It will be useful for research and job. The laboratory experiments are designed in accordance with the course.</p>
<p>6th</p>	<ol style="list-style-type: none"> 1. Quantum Mechanics 2. Electromagnetic Theory 3. Thermal and Statistical Physics <p>Optional II (any one)</p> <ol style="list-style-type: none"> 4. Solid State Physics-II 5. Electronics-II 6. Laboratory-IX 7. Laboratory-X 8. Laboratory-XI 9. Laboratory-XII 	<p>The course provides knowledge to learn mathematical tools needed to solve quantum mechanics problems. This will include complex functions and Hilbert spaces, and the theory of operator algebra. Solution of ordinary and partial differential equations that arise in quantum mechanics will also be studied. It builds connections between mathematical development and conceptual understanding. In Electromagnetic Theory it helps to determine gradient, divergence and curl of scalar and vector fields. It also formulates to solve the different problems on electromagnetism. The course is also designed to develop a working knowledge of Thermal and statistical mechanics and to use this knowledge to explore various applications related to topics in material science and the physics of condensed matter. In Solid State Physics students learn to analyze the structural properties of elemental solids, to calculate electronic conductivity of solids. It also teaches magnetic and superconducting behaviour of solids. Advanced Electronics are also being taught.</p>

DEPARTMENT OF MIZO

SI No	Course	Course Outcome
1	Course – I, Elective ~ MZ/EC/ 1 ~ Poetry-1	A student at early level in the college is assumed to have an average background and grounding in the mizo language and the culture heritage of stories,songs and folklore. As such the first paper covers the period of high development and literary consciousness.
2	Course –I, Elective ~ MZ/EC/ 2 ~ Drama – 1	Dramatic presentation of religious themes formed, as in England, the basis of Mizo dramatic literature. The popularity of drama with the Mizo’s is indicated by the ease with which translation of the best in english literature have been made in mizo, before writing in the language has seen a hundred years. Translation, therefore,comes to be part of the canon of mizo literature. The objective of reading translated drama is not to judge the merit of the work of translation, but to expose the student to the nature of serious dramatic works and acquire a critical outlook that may enable them to develop the proper critical perspective of native vernacular drama.
3	Course – (MIL) 1 ~ MZ/3/FC/ 3(MIL) ~ Introduction to Mizo Language and Literature.	Mizo in major Indian language is for the general boby of students who speak the language or has a preferable mastery of the language. The very nature of mizo traditional literature is culture based, and is inseperable from the history of the people. A proper study of random selection of the mizo literature is sufficient to inform the student of the form,subject and spirit of the literary milieue.
4	Course –III, Elective ~ MZ/3/EC/ 3 ~ Fiction – 1	The Mizo novel may perhaps be seen as a direct take over from the avid storytelling of trditional folktales of our ancestor. The rich heritage of oral literature facilitates the growth of the novel among the mizos so well that, inspite of the uncompromising market reality, the novel is growing and its development depends largely on the taste of the reading public whose taste may leave something to desire. Academy discipline is an important means of creating critical awarness and development of the genre.
5	Course –IV, Elective ~ MZ/4/EC/4 ~ Essay	Students will be able to: 1.Analyse characteristic, structures,different kinds of essays and its history 2. Understand the central idea of the texts. 3.Recognize the development of mizo essay and the life history of mizo essayists. 4.Have a great inspiration to develop mizo essay. 5.Understand the importance of novel in literature.
6	Course –V, Core ~ MZ/5/CC/5 ~ Theory of Literature	Students will be able to 1 show an appreciation of the relevance and value of theoretical models in literary study 2 Demonstrate an undersatnding of important theoretical methodologies by summarising key concepts or argument

		<p>3 Apply these concepts or arguments successfully in a close reading of literary texts.</p> <p>4 Interpret meaning of literature, and its genres ie poetry,drama,prose, fiction and criticism,..etc</p> <p>5 Value the importance of literature as it is the study of human life,as it is the study of history,as it is the study of moral.etc.</p>
7	Course –VI, Core ~ MZ/5/CC/6 ~ Selected English poems	English poetry has been made sufficiently familiar to Indian students from the early stage of education. Hence it is necessary at under-graduate level to look more intently on the somber meaning of poems a more mature critical study can yield.
8	Course –VII, Core ~ MZ/5/CC/7 ~ Poetry-II	The selection for this paper is meant to elicit a higher degree of critical insight into the mind of the poets,and thereby establish the widening range of mizo poetry.
9	Course –VIII B, Core ~ MZ/5/CC/8 (B) ~ Prose writings	A literary composition in prose not having the generic aspects of an essay, but which is more or less rounded off within a definite subject constitutes the contents of this paper.
10	Course –IX, Core ~ MZ/6/CC/9 ~ History of Mizo literature	A course in mizo literature relies on conventional classification of literature notwithstanding the presence of distinct native classification. Mizo literary heritage is inseparable from the life and culture of the people.
11	Course –X, Core ~ MZ/6/CC/10 ~ Fiction – II	<p>After complete this course students of mizo fiction II (novel) will be able to:</p> <p>1 Understand the plot construction,characterisation,settings,narration,heroism,any other important elements and techniques</p> <p>2 Student will demonstrate the use of or knowledge of effective approaches for creating sustained works of fiction distinguished by a nuanced use of appropriate narrative elements,techniques and conventions.</p> <p>3 Identify different kinds of novels such as war novel,love,fantasy and novel of social reforms.etc through the mizo novel they learnt.</p> <p>4Grasp the value of mizo novelist,understand the development of mizo novel.</p>
12	Course –XI, Core ~ MZ/6/CC/11 ~ Mizo language and grammar	The study of mizo language for academic courses has yet to be done formally. Therefore, it is felt essential to introduce certain grounding in the phonetics of the language with the objective of moderating and harmonizing the various individual approaches available so far.
13	Course –XII, Core ~ MZ/6/CC/12(B) ~ Selected English prose	A course in the variety of english prose writing in terms of subject, theme and style is expected to open the eyes of students to the wide scope of prose writing for the development of their skill and creativity.

DEPARTMENT OF POLITICAL SCIENCE

SI No	Course	Course Outcome
1	<i>Government & Politics of Mizoram:</i>	<ol style="list-style-type: none"> 1. Tradition, Social, Political and Inner Line Regulation. 2. Insurgency – causes, courses, result and Peace Accord 3. Executive in Mizoram 4. Political Parties 5. Local administration- V.C & A.M.C, and Sixth Schedule
2	<i>Indian Government and Politics</i>	<ol style="list-style-type: none"> 1. Constitution- Formation and importance 2. Centre – State relations, Amendment Procedure and Emergency Provisions 3. Union and State executive 4. Judicial System and Election Commission of India <p>Major issues like Casteism, Regionalism and Communalism, Local and Block level administration</p>
3	Major Political System: Constitution of UK, US, Switzerland and China.	<ol style="list-style-type: none"> 1. Salient features of their constitutions 2. Party System 3. Presidential form of government like US Parliamentary form of government like UK Direct democracy like Switzerland and Communist system in China
4	Political theory	<ol style="list-style-type: none"> 1. Basic and approaches 2. Theory of State and Sovereignty 3. Meaning and Kinds of Law, Liberty and Equality. 4. Rights and Justice 5. Democracy and Welfare State
5	Paper five: Western Political Thought	<ol style="list-style-type: none"> 1. Political ideas of Plato and Aristotle 2. St. Augustine and Machiavelli's political view on religion and state 3. Social Contract theory of Hobbes, Locke and Rousseau. 4. Utilitarianism on Bentham and J.S Mill 5. Political ideas of Marx and Hegel
6	Paper six: International Relations	<ol style="list-style-type: none"> 1. Meaning and approaches 2. Nature of Sovereign Nation State, National Interest and National Power 3. Third world countries and its organization – NAM 4. Cold war and its consequences 5. Different approaches on international security
7	Paper seven: Public Administration	<ol style="list-style-type: none"> 1. Meaning, Scope and approaches 2. Administration in organization and its behavior 3. Personnel administration in recruitment, training and promotion 4. Administrative relationship between minister and civil servant, and Judiciary 5. Budgeting in India and its committee

8	Paper eight: Human Rights	<ol style="list-style-type: none"> 1. Meaning and importance 2. Relations with UN 3. Rights of women, children, minority, disabled and old age. 4. International instruments of Human Rights i.e. civil, political, social and economics 5. Relations with Indian Constitution
9	Paper nine: Indian Political Thought	<ol style="list-style-type: none"> 1. Sources 2. Social reformer like Raja Ram Mohan Roy, D. Saraswati and S. Vivekananda 3. Nationalism of G.K Gokhale, B.G Tilak, M.K Gandhi and Jawahar Lal Nehru 4. Political ideas of M.N Roy, B.R Ambedkar and J.P Narayan
10	Paper ten: Indian Foreign Policy	<ol style="list-style-type: none"> 1. Nature and determinants 2. NAM- policy and its relevance 3. Indian relations with major power like US, Russia and China 4. Indian relations with neighbouring countries 5. Indian relations with ASEAN and EU. India's Nuclear Policy
11	Paper eleven: United Nations	<ol style="list-style-type: none"> 1. Origin of international organization 2. Organs of the UN 3. UN agencies , programme and funds 4. UN activities i.e. Human Rights and Peace Keeping 5. Reforms and relevance of the UN
12	Paper twelve (b): Southeast Asian Politics	<ol style="list-style-type: none"> 1. Geography, Culture and Socio-economic conditions 2. Relations with India since 1980 3. Southeast Asian Nations and Indian economic and Strategic engagement 4. Indian relations with Indonesia, Thailand, S. Korea and Myanmar 5. ASEAN relations with China and Japan

DEPARTMENT OF ZOOLOGY

SI No	Course	Course Outcome
1	ZL - I : <i>BIOSYSTEMATICS AND NON – CHORDATE BIOLOGY</i>	On completion of the course, students are able to : CO 1. Understand the classification, nomenclature, hierarchy, phylum, etc. CO 2. Understand about the non-chordate animals CO 3. To study the external as well as internal characters of non-chordates CO 4. To study the distinguishing characters of non-chordates CO 5. Understand the general characters of Molluscs, Arthropoda, and Echinodermata.
2	ZL – III : <i>CHORDATE BIOLOGY AND ANATOMY</i>	On completion of the course, students are able to : CO 1. Understand the phylum Chordate and its Classification CO 2. Understand about the basic concept about Chordates CO 3. Understand the external morphology and Anatomy in Chordates CO 4. Study and understand the various systems, adaptation and dentition in mammals
3	ZL - V : <i>EVOLUTION AND ETHOLOGY</i>	On completion of the course, students are able to : CO 1. Understand the concept of evolution and natural selection CO 2. Understand different hypothesis and zoo-geological time scale CO 3. Study different fossils and adaptations CO 4. Study types of behavior in animals CO 5. Understand effects of hormones on behavior
4	ZL – VII : <i>ENDOCRINOLOGY AND REPRODUCTION BIOLOGY</i>	On completion of the course, students are able to : CO 1. Understand endocrine glands and their hormones CO 2. Understand hormones and their functions CO 3. Understand Biological rhythms and their regulation CO 4. Understand male and female reproductive systems
5	ZL – IX : <i>CELL BIOLOGY</i>	On completion of the course, students are able to : CO 1. Understand the scope of cell biology because cell is the basic unit of life CO 2. Understand the main distinguishing characters between plant cell and animal cell CO 3. To study and understand the whole cell organelles with their structure and function CO 4. Understand the cell cycle and know the importance of various cells in body organisms CO 5. Understand the various applications of cells by using cell biology like study of types of tumour
6	ZL - XIII : <i>PHYSIOLOGY</i>	On completion of the course, students are able to : CO 1. Understand the process and mechanism of digestion and respiration CO 2. Understand the blood and cardio vascular system CO 3. Understand the system and osmoregulation CO 4. Understand different types of muscles and their mechanisms CO 5. Understand the neurons and nerve transmission
7	ZL - XIII : <i>BIOCHEMISTRY</i>	On completion of the course, students are able to : CO 1. Understand the concept of Biochemistry and the Biochemical events inside the body

		<p>CO 2. Understand the properties and functions of enzymes and vitamins</p> <p>CO 3. Understand the generation of energy (ATP)</p> <p>CO 4. Understand the important biochemical processes such as glycolysis, TCA cycle,</p> <p>CO 5. Understand fish breeding and processing of fishes</p>
8	ZL – XV A : <i>APPLIED ZOOLOGY</i>	<p>On completion of the course, students are able to :</p> <p>CO 2. Understand Apiculture and Sericulture</p> <p>CO 3. Understand types of pesticides, pest control and vermicomposting</p> <p>CO 3.Understand fish farming and pond maintenance</p> <p>CO 4.Understand different types of fishes and their adaptation</p> <p>CO 5. Understand fish breeding and processing of fishes</p>
9	ZL - XVII : <i>MOLECULAR BIOLOGY AND GENETICS</i>	<p>On completion of the course, students are able to :</p> <p>CO 1. Understand the basis of molecular biology – DNA, RNA,chromosomes,etc.</p> <p>CO 2. Understand DNA replication</p> <p>CO 3. Understand central dogma of replication, gene expression, transcription, translation, etc.</p> <p>CO 4. Understand the basics of genetics and inheritance</p> <p>CO 5. Study gene behavior, mutation, genetic disorders</p>
10	ZL - - XIX : <i>DEVELOPMENTAL BIOLOGY</i>	<p>On completion of the course, students are able to :</p> <p>CO 1. Understand male and female gametes, types of eggs, fertilization and cleavage</p> <p>CO 2. Study blastula, gastrula, fate maps and different morphogenetic movements</p> <p>CO 3. Study different types of placenta and extra embryonic membrane</p> <p>CO 4. Understand metamorphosis and regeneration</p> <p>CO 5. Study about ageing, birth defects, transgenesis and stem cells</p>
11	ZL – XXI : <i>PARASITOLOGY AND IMMUNOLOGY</i>	<p>On completion of the course, students are able to :</p> <p>CO 1. Understand parasitology and their terminology</p> <p>CO 2. Understand different types of parasites and their life cycles</p> <p>CO 3. Understand parasite- host relationships and their pathogenecities</p> <p>CO 4. Study the basics of immune system and their nature</p> <p>CO 5. Understand antigen-antibody relationship, MHC, Allergy, etc</p>
12	ZL - XXIII B : <i>ECOLOGY AND WILDLIFE</i>	<p>On completion of the course, students are able to:</p> <p>CO 1. Understand the concept of ecology and ecosystem, food chain and trophic relationship</p> <p>CO 2. Understand non-living components of an ecosystem, mineral cycles and water cycle.</p> <p>CO 3. Understand the living components of ecosystem and their relationships, global warming etc.</p> <p>CO 4 .Study different characteristics of populations, species diversity and richness.</p> <p>CO 5. Study the conservation natural resources and environment at national and International levels, and wildlife managements.</p>

DEPARTMENT OF ECONOMICS

Sl. No.	Name of Course	Course Outcome
1.	Paper I: Microeconomics - I	At the end of the course, the learner will be able to understand the basic principles underlying market mechanisms – how the forces of demand and supply brings equilibrium in the market for goods and services.
2.	Paper II: Microeconomics - II	The learner will understand how factor market works and the basic tools in welfare economics and trade theories.
3.	Paper III: Macroeconomics - I	The learner will be able to access the workings of the economy and the role of investment and money.
4.	Paper IV: Macroeconomics - II	At the end of the course, the learner will understand fluctuations in the economy and models of economic growth.
5.	Paper V: Indian Economy	At the end of the course, the learner will understand the performance of Indian economy.
6.	Paper VI: Public Finance	The learner, at the end of the course, will be able to follow the role and significance of public expenditure, taxation and public debt in the economy.
7.	Paper VII: Quantitative Techniques - I	The learner will be able to interpret and analyse economic data using mathematical tools.
8.	Paper VIII (Optional A): Agricultural Economics	The learner will understand the role of agrarian relation, land reforms and technological change in agricultural development.
9.	Paper IX: Environmental Economics	At the end of the course, the learner will be able to understand economy-environmental linkages.
10.	Paper X: Quantitative Techniques - II	The learner will be able to define and understand applications of quantitative methods.
11.	Paper XI: Financial Institutions and Markets	The learner will understand the working and performance of various segments of financial sector.
12.	Paper XII: International Trade	The learner will understand impacts of protection in trade and liberalization in trade measures.

DEPARTMENT OF MATHEMATICS

Sl.No	Course	Course outcome
1	MATH/1/CC/111: Calculus	<ul style="list-style-type: none"> • Students learn Differentiation and different methods of Integration, its application • Sequences and series ; different methods to test the convergence
2	MATH/2/CC/121: Algebra	<ul style="list-style-type: none"> • Basic knowledge about Group Theory • Properties of Polynomials • Theory of Equations and methods to solve the Equations
3	MATH/3/CC/231: Differential Equation	<ul style="list-style-type: none"> • Learn how to solve ordinary and partial differential equations • Knowledge about orthogonal Trajectories • Application of differential equation to Physical Problems
4	MATH/4/CC/241: Vector calculus and Solid Geometry	<ul style="list-style-type: none"> • Have knowledge about the algebra and the differential and integral calculus of vectors. • Two dimensional geometry and different conics and their properties. • Three dimensional geometry, planes, Cone , cylinder and spheres
5	MATH/5/CC/351: Computer Oriented Numerical Analysis	<ul style="list-style-type: none"> • Will be acquainted with difference operators and difference tables. • With Gauss elimination method, Gauss-Jordan method, Gauss-Siedel method and Crout's to solve system of linear equations. • Solutions of differential equations using different methods.
6	MATH/5/CC/352: Real Analysis	<ul style="list-style-type: none"> • Understand basic properties of Euclidean distance function, neighbourhood, open set, closed set in Euclidean spaces. • Metric spaces • Through knowledge of real valued functions of several variables, partial derivatives
7	MATH/5/CC/353: Complex Analysis	<ul style="list-style-type: none"> • Know in detail about the complex number system • Analytic function and its basic properties • Power series and its convergence • Integral of complex valued functions • Power series representation of analytic function
8	MATH/5/CC/354A: Operations Research	<ul style="list-style-type: none"> • Will acquire through knowledge linear programming problems • Graphical method, Simplex method to solve LPP • Assignment problem, Transport problem and its application in management. • Game theory and its application
9	MATH/6/CC/361: Modern Algebra	<ul style="list-style-type: none"> • Students gain sound knowledge about normal subgroups, homomorphism, isomorphism, automorphism • Rings, integral domain, ideals, quotient rings • Vector spaces

10	MATH/6/CC/362: Advanced Calculus	<ul style="list-style-type: none"> • Know Riemann integrals, properties of integrable functions • Improper integrals • Sequences of real valued functions
11	MATH/6/CC/363: Mechanics	<ul style="list-style-type: none"> • Will be to solve problems of coplanar forces, friction. • Find out C.G. of gravity rigid bodies • Motion in straight lines, in planes, projectiles. • Have knowledge about Work, Power, Energy
12	MATH/6/CC/364A: Astronomy	<ul style="list-style-type: none"> • Know about spherical trigonometry • Celestial sphere, different systems to identify the positions of heavenly bodies • Atmospheric refraction, side real time, side real period • Kepler's laws

DEPARTMENT OF HISTORY

Sl.	Name of Course	Course Outcome
1	Paper I History of Mizoram	The course introduced to the students the nature of historical development in Mizoram such as culture, customs, traditions and practices of the Mizo. It inculcated among the students the spirit of nationalism and the greatness of the traditional chiefs and their relations with the British
2	Paper II History of India upto Post-Maurya period	The course introduced the elements of change and continuity in Indian history from the ancient period upto the post-Maurya period. It culcated the knowledge of the social, political and cultural development during the said period.
3	Paper III History of India (Gupta to Sultanate Periods)	The course introduced the method of historiographical studies to the to the students, the elements of change and continuity in the sphre of political, social and cultural particularly from the period of Gupta to Sultanate period.
4	Paper IV History of the Mughals	The course provides an overview of the main trends and developments in India during the Mughal period(1526-1757). It gathered,organized and reinterprets the existing sources, both primary and secondary. It also acquainted the students the knowledge of socio-economic and political developments during these periods.
5	Paper V Modern India	The course covered the emergence of major developments in India during the rise and growth of British power in India. It also inculcates the rise of nationalism and imparted in the students the feeling of nationalism and patriotism.

6	Paper VI Historiography	The course introduced to the students 'what exactly is history'. It teaches the students how to study history and the different historical school of thought. It prepared and helped the students for their research work in the future.
7	Paper VII Early Modern Europe	This course introduced to the students the political, economic, religions and cultural history of continental Europe till the early modern period and the knowledge of the emergence of Europe as the first truly global power. It also introduced the ideas that shape the modern institutions and taught the students to analyze and critique the ideas.
8	Paper VIII History of North East India (1822-1986)	The course highlighted the history of Assam and the whole of North East India with the major trends of socio-political and economic developments from 1822 to the reorganization of the states. It also imparted knowledge on the policies adopted by the British in North East India and the effects of India's nationalist's movement in North East India.
9	Paper IX Modern World History	The course covers the political transformation of the modern world from the 19th century till the end of the second war. It also imparted knowledge on the socio-cultural development during that period, knowledge on the first and the second world war and the changes and continuity of the world.
10	Paper X Contemporary World	The course imparted to the students the political history of the world since the end of the second world war focusing on the change and continuity over time and space. It also inculcated knowledge on the socio-economic and cultural developments of the said period and cultural developments of the said period and the globalization and its impact over the world
11	Paper XI Modern India II	The course introduced to the students the historiography of Indian nationalism, the rise of nationalism and India's struggle for independence from the British imperialism and the roles played by the leaders and different sections of the Indian during the freedom movement. it also acquainted the students with the British policy, stressing on the positive and negative effects
12	Paper XII History of USA(1776-1945)	This course introduced to the students early settlement and colonisation by Europeans, how the American won freedom from the British imperialism and its historical interpretation, the ways in which the history of the United States informs the current political and relationship to global culture.

DEPARTMENT OF GEOGRAPHY

Course / Semester	Course Code	Name of Course	Course Outcome
1	Geog - 101	Physical Geography	Students will have a general understanding of physical geographic processes, the global distribution of landforms and ecosystems, and the role of the physical environment on human populations. The objective of this course is to introduce the latest concepts in the field of geomorphology and climatology.
2	Geog – 201	Human Geography	The objective of this course is to acquaint the students with the man-environment relationship and human capability to adopt and modify the environment under its varied conditions; identify and understand environment and population in terms of their quality and spatial distribution pattern, and to comprehend the need for managing and conservation of resources.
3	Geog – 301	Geography of India	This course aims at presenting a comprehensive, integrated and empirical based profile of India. Besides, the objective is to highlight the linkages of systematic geography of India with the regional personality of the country. It is designed so as to present the role of the geographical positioning of India in moulding its geographical personality and its inter-relations with other countries.
4	Geog – 401	Cartographic Technique (Practical)	This course is introduced to inculcate in the student a fairly high level of understanding cartographic techniques used in geographical studies and research.
5	Geog – 501	Geographical Thought	The course intends to acquaint the students with the distinctiveness of geography as a field of learning in social as well as natural sciences. It also aims at knowing the underlying philosophy and methodology of the subject.
	Geog - 502	Economic Geography	Students will have a general understanding of how the physical environment, human societies, and local and global economic systems are integral to the principles of sustainable development.
	Geog - 503	Surveying & Statistical Techniques	To develop a fairly high level of competence in the use of quantitative, cartographic and field work techniques used in geographical studies and research.
	Geog – 504 A	Population Geography (Optional A)	Students will have a general understanding of global human population patterns, factors influencing the distribution and mobility of human populations including settlement and economic activities and networks, and human impacts on the physical

			environment. Students will understand general demographic principles and their patterns at regional and global scales. To provide the students an understanding of spatial and structural dimensions of population and the emerging issues.
	Geog – 504 B	Agriculture Geography (Optional B)	This course is introduce to familiarised the students with the concept, origin and development of agriculture; examine the role of agricultural determinants towards changing cropping pattern, intensity productivity, diversification and specialisation.
6	Geog - 601	Geomorphology	The course reviews topics within geomorphology and earth surface processes such as key concepts of geomorphology, landform development at different spatial and time scales, endogenic and exogenic processes, their controlling mechanisms, and their interaction to form the landscape. It considers different geomorphic contexts such as fluvial, coastal, aeolian and periglacial and the interaction between these and climate. The course involves field and laboratory methods relevant to geomorphology.
	Geog - 602	Remote Sensing & Geographical Information System (Practical)	This course is included to introduce to the students the basic principles of aerial photo and satellite imagery and Geographical Information Systems and to train them in visual and digital interpretation of satellite imagery.
	Geog - 603	Project Work (Practical)	Students will be able to use accepted field, laboratory and statistical techniques to quantify the quantity, characteristics, and history of physical phenomena for geographic research and natural resources management.
	Geog – 604 A	Urban Geography (Optional A)	This is concerned with various aspects of cities and emphasizes location and space and studies the spatial processes that create patterns observed in urban areas. To do this, they study the site, evolution and growth, and classification of villages, towns, and cities as well as their location and importance in relation to different regions and cities. Economic, political and social aspects within cities are also important in urban geography.