

PROGRAMME OUTCOMES
PROGRAMME SPECIFIC OUTCOMES
COURSE OUTCOMES

Department of Anthropology

Programme Outcomes

- M.Sc programme in Anthropology aim at the following outcome:
- Proficient in evolutionary biology as applied to human evolution.
- Able to understand and analyze population genetics data.
- Cultural barriers or potency for economic growth and Development.
- Learn to communicate in context of cultural differences.
- Under Business in cultural context and to navigate the market accordingly.
- Have real practical experience in fieldwork and report writing.
- Prepare the students for qualitative (especially focusing in ethnography) and quantitative research.
- Better understanding of human being as integrated biological and social being.

Programme Specific Outcomes

- Able to interpret molecular genetic data.
- Well verse in the use of statistics in research.
- Trained in methods of qualitative research.
- Able to use insights from anthropology in business.
- Experience in doing fieldwork and writing scientific report about it.
- Training in literature review, publications and article writing for journals.

Course Outcomes

Semester I		
Course No	Course Title	Course outcome
Theory		
ANTH -101	Evolutionary Anthropology	To acquire the conceptual knowledge regarding: Historical and contemporary theories of evolution. Study relevant fossils regarding human evolution. Issues related to race and human variation. Molecular markers use in study of human variation.
ANTH-10 2	Fundamentals of social Anthropology	To acquire the conceptual knowledge regarding: Fundamental concepts of society and culture. The scientific understanding of language. Intellectual history of social anthropology.
ANTH -103	Family, Kinship and Marriage	To acquire the conceptual knowledge regarding: The role of kinship in organizing society. The contemporary issues on marriage and kinship Interface of traditional concept of kinship and modern technology.
Practicals		
ANTH -104(P)	Somatometry, Somatoscopy and craniometry	To give hands on training to the students on: Measurements of body, skull and somatoscopy and application of such skills.
ANTH -105(P)	Human growth shape and size measurement.	To give hands on training to the students on: Measurements of body relevant to the study of human growth and bio-medical studies.
ANTH-106(P)	Osteology, Osteometry	To give hands on training to the students on: Diagrammatic representation of human bones and various techniques of bone measurements.

Course No	Course Title	Course outcome
Semester 2		
Theory		
ANTH-201	Prehistoric Archaeology	To acquire the conceptual knowledge regarding: Theoretical framework to understand human's past. Intellectual history of the study of human origin. Various stages in the development of tools and technology. Prehistoric past of Indian subcontinent.
ANTH -202	Anthropology of India	To acquire the conceptual knowledge regarding: History of anthropological study in India. Identity, socio economic issues of Tribes and tribal movements. Linguistic and physical diversity in India.
ANTH-203	Anthropological genetics	To acquire the conceptual knowledge regarding: Technologies related to molecular genetics. Data analysis and interpretation of molecular human genetics. Human medical genetics. Fundamental of population genetics.
Practicals		
ANTH -204(P)	Prehistoric Archaeology I-Tool representation, description and Typology	To provide hands on training on: Identification of rocks/ minerals. Diagrammatic representation of tools. Technical representation of tools. Description of tools and tool typology.
ANTH-20 5(P)	Prehistoric archaeology II-Tool measurements and Excavation technique	To provide hands on training on: Excavating a set up trench. Numbering of grids and artifact during excavation. Plotting of artifacts during excavation. Measurement of tools and calculation of indexes. Measurement of Flakes. Cataloguing of stone tools and artifacts.

ANTH -206(P)	Serology, Colour blindness, PTC, Karyotyping, dermatoglyphics and pedigree analysis	To provide hands on training on: Detection of biochemical markers such as blood group, PTC. Study of colour blindness. Study of dematoglyphics Pedigree analysis Karyotyping.
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Course No	Course Title	Course outcome
Semester 3		
Theory		
ANTH -301	Anthropological theories	To acquire conceptual knowledge on: The theoretical framework of social anthropology. Development of various social theories. Contemporary theories.
ANTH -302	Research Methodology	To acquire conceptual knowledge on: Application of theories to research. Research methods pertaining to qualitative and quantitative research. Research design. Data collection and analysis.
ANTH -303	Demographic Anthropology	To acquire conceptual knowledge on: Demography theories and its application to anthropology. Sources of demographic data. Components of population change.
Practicals		
ANTH -304(P)	Research Methods & techniques I	Hands on training on: Research design. Research proposal. Various methods of data collection.
ANTH -305(P)	Research Methods & techniques II	Hands on training on quantitative analysis of data and application of various statistical software.

ANTH -306(P)	Demographic Anthropology	<p>Hands on training on: Obtaining demographic data from demographic data sources. Analysis of such data. Application of such data and analysis on various social issues and medical research. Pictorial and diagrammatic representation of demographic data.</p>
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Course No	Course Title	Course outcome
Semester 4 Group A		
Theory		
ANTH -401	Human Population Genetics	<p>To acquire conceptual knowledge on: Historical development of population genetics concepts. Various concepts and its application in human population genetics. Population genetic history. Pictorial representation of phylogenetics and population distance. Analysis and interpretation of phylogenetics data.</p>
ANTH -402	Physiological Anthropology	<p>To acquire conceptual knowledge on: Concepts of human physiology. Work physiology. Physical fitness and aging Physical response to various stresses. Physiological adaptations to various environments. Research methodologies of human physiological studies.</p>
	One choice based paper	
Practicals		
ANTH-403(P)	Physiological Anthropology	<p>Hands on training on: Measurements/ calculation of various variables required for human physiological research and studies. Use of equipments related to human physiological research and studies.</p>

ANTH-407	M.Sc. Dissertation with viva based on field work	To train the students to carry out anthropological research by undertaking ten days fieldwork with a particular research topic and to develop the data into a dissertation.
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Course No	Course Title	Course outcome
Semester 4 Group B		
Theory		
ANTH -404	Economic and Development Anthropology	To acquire conceptual knowledge on: Concepts of economic anthropology. Effects of culture on economy. Exposure to contemporary debates on development issues. Issues of economy and development on the North east region of India.
ANTH -405	Medical Anthropology	To acquire conceptual knowledge on: Socio-cultural and environmental dimensions of health. Traditional medical system and modern bio-medical system. Anthropological dimension to epidemiological studies. Health policies of Nagaland.
One choice based paper		
Practicals		
ANTH-406(P)	Economic and Development Anthropology	Provide hands on training on: Research identification and research proposal on economic related topics. Research on economic and development issue.
ANTH-407	M.Sc. Dissertation with viva based on field work	To train the students to carry out anthropological research by undertaking ten days fieldwork with a particular research topic and to develop the data into a dissertation.

Choice based papers for 4th semesters

Course No	Course Title	Course outcome
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ANTH C-408	Kinanthropometry and Ergonomics	<p>To acquire conceptual knowledge on: Biomechanics of human movement. Biomechanics, physiology and nutritional aspect of sports. Principles of ergonomics Human centered product design.</p>
ANTH C-409	Business Anthropology	<p>To acquire knowledge on: Organization behavior and management. Business innovation process. Principles of innovation in business. Entrepreneurship and its Determinants Consumer behaviour and marketing research.</p>
ANTH C-410	Ecology and society	<p>To acquire conceptual knowledge on: Culture and ecology. To acquire conceptual knowledge on: Environmental ethics. Religious ethics for Biodiversity conservation. Economic systems and environmentalism</p>

Department of Botany

Programme Outcomes

- Students are expected to learn about the basics of lower plants and their importance.
- Important aspects of plant pathology such as diseases caused by fungi, bacteria and viruses and defence mechanisms will be dealt with suitable details for the benefit of the students.
- Students will learn about the diversity of flowering plants and their different systems of classifications.
- To inspire students to understand the anatomy, embryology and palynology of angiosperms.
- Will gain knowledge about some important aspects of biochemistry, biosynthetic and metabolic pathways, plant metabolism, factors affecting plant growths etc.
- Different aspects of cell biology/cytology including plant cell structure, components and functions; different aspects of genetics and plant breeding will be learnt by the students.
- Different biological processes at molecular level and different modern techniques in the field of biotechnology with reference to plants with hands on training will be provided.
- On completion of the course students will have the expertise in Bioprospecting, test various physico-chemical properties of water and soil, qualitative and quantitative mapping of resources which would help in creating employability in various institutes/centres related in the field of Environment and Forest, Government and NGO's dealing with Biodiversity and Sustainable livelihood. It will also help encourage Bio-entrepreneurship.
- Introduction to basic statistical tools for biological research and data analysis. Awareness of climate change and to provide exposure on resilience of species in nature
- The students will also learn about phylogenetic tree and phenetic approach to classification along with scope and concept of biosystematics.

Programme Specific Outcomes

- Students will be able to handle equipments for analytical techniques with regards to soil and water quality assessments. Techniques such as Spectrophotometry, Nitrogen analyzer, Flame photometer, Digital herbarium.
- Students will learn techniques of fungal and bacterial isolation and its culture. Students can identify the pathogen and its associated plant diseases.
- Students will be capable to perform various experiments related to 'Plant Tissue Culture, Molecular characterization, Phytochemical analysis, Molecular biology, Biotechnology and other Applied Plant Science' as they will be trained to handle different equipments like PCR, Different Gel Imaging Systems, UPLC, Electrophoresis Systems, Biosafety Cabinet, Laminar Flow Cabinet, Deep Freezers, Different types of Autoclaves, Ultra

Water Purifier, Refrigerated Centrifuge, Muffle Furnace and other modern equipments necessary for modern days research.

- Student will undertake a small research topic as a part of M Sc. Dissertation and will execute in two semesters. The purpose of the assignment is to ignite the analytic approach of the students and mentally prepare as a potential future researcher. Further, students will be allowed for 'Industrial Visit, National Research Laboratories of their choice for a short duration or 'Academic Study Tour' as per the University rule.

Course Outcomes

Semester	Course No	Course Name	Course outcome
I	BOT(T)-101(C)	Lower Plants	Introduces about the diversity of lower plants viz., Algae, Bryophytes, Lichens and Pteridophytes. It also contains topics on classification, distribution, cellular structure and various beneficial products of these lower plants. The ecological importance of this group of plants is also presented. Students are expected to learn about the basics of lower plants and their importance.
	BOT(T) - 103(C)	Mycology, Plant Pathology and Microbiology	Important aspects of plant pathology such as diseases caused by fungi, bacteria and viruses and defense mechanisms will be dealt with suitable details for the benefit of the students. These topics will enrich the background of those who wish to study Plant Pathology intensively. Ecology of microorganisms specially soil, air and microbial interactions, fermentation, food and dairy, antigen-antibody interactions will be discussed in detail. This course may create employability in various entrepreneurship by way of executing mushroom cultivation, fermentation technology and identifying plant diseases in agricultural/horticultural sector.
	BOT(T)-105(C)	Angiosperm Taxonomy and Economic Botany	In this course the student learns about the diversity of flowering plants and their different systems of classifications. A clear picture of plant nomenclature is also presented to the learners. The student is also expected to learn about the recent trends employed in solving taxonomic problems. The ecological importance of plants is also emphasised.
II	BOT(T)-201(C)	Gymnosperm, Anatomy, Reproductive Bio and Embryology	To study and impart knowledge about the occurrence, distribution, structure and life history of Gymnosperms, Angiosperms and fossil plants. To inspire students to understand the anatomy, embryology and palynology of angiosperms.
	BOT(T)-203(C)	Plant Physiology	This paper deals with the different aspects of plant biochemistry and plant physiology. Students will gain knowledge about some important aspects of biochemistry, biosynthetic and metabolic pathways, plant metabolism, factors affecting plant growths etc. The knowledge so gathered in this paper can be

			utilized in the subsequent semesters/papers. Efforts are being made to accommodate most of the important aspects of plant biochemistry and physiology which can be completed in one semester duration. This paper will help students to prepare for employment in 'Biochemical industry and related Government and private sectors.
	BOT(T)-205(C)	Plant Biochemistry and Molecular Biology	This paper deals with the different aspects of plant biochemistry and plant molecular biology. Students will gain knowledge about some important aspects of biochemistry, biosynthetic and metabolic pathways, plant metabolism, and molecular biology etc. The knowledge so gathered in this paper can be utilized in the subsequent semesters/papers. Efforts are being made to accommodate most of the important aspects of plant biochemistry and molecular biology which can be helpful of students to prepare for employment in 'Biochemical and molecular biology industries and related Government and private sectors.
III	BOT(T)-301(C)	Cell Biology, Cytogenetics and Plant Breeding (4 Credits)	This paper deals with the different aspects of cell biology/cytology including plant cell structure, components and functions; different aspects of genetics and plant breeding. Paper also deals with structure and function of genes and their regulation, population genetics and basic aspects of gene interactions and its rule in plant breeding.
	BOT(T)-303(C)	Plant Biotechnology	It is very important to understand the basics of different fundamental functions of any organism at molecular level. Further, the use different emerging technologies/tools in biological science are necessary for human welfare. This paper deals with different biological processes at molecular level and different modern techniques in the field of biotechnology with reference to plants. This paper will help in getting employment in 'Plant Tissue Culture Industry/Lab, Biotechnology Industry/Lab, Faculties/ Scientists in the Colleges/University/Research Institutes. Further, the students can start their own entrepreneurship unit/Startup.

	BOT(T)-305(C)	Plant Ecology and Ecosystem Analysis	To understand the fundamentals of plant ecology, learn about the complex processes in population and community ecology. Recognize the importance of ecological interactions in shaping the structure of ecological communities. To make students learn about the structure and functional ecology of various ecosystems. On completion of the course students have the capability to test various physico-chemical properties of water and soil which would help in creating employability in various institutes/centers related in the field of environmental activities.
IV	BOT(T)-401(C)	Biodiversity, Phytogeography, Biostatistics and Environment (4 Credits)	To gain understanding of the status of the world biodiversity, value and drivers of its loss. Introduction of basic statistical tools for biological research and data analysis. Awareness of climate change and to provide exposure on resilience of species in nature.
	BOT(P)-403(C)	Project Work and Academic Study Tour	The Post Graduate students are the future Scientists of the Nation. It is very important to develop a bridge between the formal classrooms teaching-learning and formal research. The purpose of this course is to introduce the PG students in the field of research enabling them to ignite their mind and develop analytic approach. Student will take a small research topic which is doable within a period of two semesters and the outcome of the study will be presented in the form of 'Dissertation'. Further, students will be allowed for 'Industrial Visit, National Research Laboratories of their choice for a short duration or 'Academic Study Tour' as per the University rule.
	BOT(T)-404(CBCP)	Angiosperm Taxonomy and Biosystematics	This paper introduces advanced concepts and scope of Taxonomy. It also introduces show to refer classical and recent literatures related to taxonomy. The students will also learn about phylogenetic tree and phenetic approach to classification along with scope and concept of biosystematics.
	BOT(T)-406 (CBCP)	Biodiversity Conservation, Ecosystem Services and Ecological Restoration	To understand the (i) basic concepts and scientific principles of conservation and global patterns in biodiversity (ii) value and different services provided by ecosystems. Current efforts to conserve biodiversity at global, national and local scales. On completion of the course students have the capability to test various physico-chemical properties of water and soil which would help in creating employability in various institutes/centers related in the field of

			environmental activities.
	BOT(T)-408 (CBCP)	Microbial Studies	Ecology of microorganisms, detail account of inter-specific relationships, biogeochemical cycling and bioremediation aspects will be discussed in detail.
	BOT(T)-410 (CBCP)	Plant Biotechnology	It is very important to understand the basics of different fundamental functions of any organism at molecular level. Further, the use different emerging technologies/tools in biological science are necessary for human welfare. This paper deals with different biological processes at molecular level and different modern techniques in the field of biotechnology with reference to plants. This paper will help in getting employment in 'Plant Tissue Culture Industry/Lab, Biotechnology Industry/Lab, Faculties/ Scientists in the Colleges/University/ Research Institutes. Further, the students can start their own entrepreneurship unit/Startup.

Department of Chemistry

Programme Outcomes

- Upon Completion of the M.Sc. Chemistry programme, students are expected to have sound Knowledge of the principles and applications of the different branches of Chemistry, viz., organic, inorganic and physical analytical chemistry. This core knowledge is essential in any chemistry related profession.
- Further, the programme provides knowledge of different spectroscopic techniques along with hands-on training on interpretation of spectral data.
- Programme also allows students to learn about various analytical techniques, and this knowledge is essential in all fields of Chemistry. The coverage of the programme allows the students to consider different competitive exams such as CSIR-NET, GATE, ONGC, BARC, DRDO, etc.
- Courses such as natural product chemistry, medicinal chemistry and drug design, polymers, environmental chemistry, green Chemistry, etc provide the academic foundation for diverse research pursuits. Project work, which is a compulsory part of the fourth semester further provides students with exposure to research.
- A student will learn fundamentals of Analytical Techniques which will be useful for any applied studies related to Chemistry
- Students will be able to learn how quantum approach overcomes the drawbacks of classical theory to study microparticles and also to study the wave properties related to universe.

Programme Specific Outcomes

- Students would be able to interpret NMR, IR, UV-VIS Mass spectroscopy data of Organic and Inorganic Compounds
- Students would be able to separate/identify a mixture of compounds by chromatographic techniques
- Students will have some basic training about literature review, journal publications, quality journals etc. which will help the student in his/her future research programme.
- Choice Based Credit papers such as biological and medicinal chemistry, environmental, green and sustainable chemistry, polymer and nano chemistry are very relevant areas of study which have current applications in both research and applied chemistry.

Course Outcomes

Semester	Course No	Course Name	Course outcome
I	CHEM – 411	Inorganic Chemistry-I	After completing this course, students will have in-depth knowledge on the theories and applications of acids and bases; all aspects of main group elements and their applications in industrial chemistry will be understood; Students will have thorough knowledge on molecular symmetry based on symmetry elements and symmetry operations. Students will also be able to classify molecules into different symmetry point groups; Students will have profound knowledge on Great Orthogonality Theorem and its application in chemical bonding such hybridization
	CHEM – 412	Organic Chemistry-I	In this course, students will learn various Organic reactions related to oxidation, reduction and carbonyl compounds. It will be very helpful for students to learn and understand organic synthesis by using various reagents and also the students will learn about the stereochemistry of organic molecules.
	CHEM – 413	Physical chemistry-I	Students will have a in depth knowledge on Basic and the fundamental of thermodynamics; Role of entropy in the irreversible processes, phenomenological equations and states of minimum entropy production; How the reaction takes place and how to measure the rate of a reactions, various related theories; How an enzyme can catalyze a reaction, fundamentals of photochemical reactions, oscillatory reactions; Detail studies of fast reactions
	CHEM – 414	Laboratory Course in Inorganic Chemistry	Students will have knowledge on estimations of various metals and syntheses of several inorganic complexes
II	CHEM – 421	Inorganic Chemistry-II	This course allows students to learn about the following: Chemistry of Transition and Inner Transition Elements; Kinetics of Inorganic Reactions and Metal-Ligand Equilibria in Solution; Transition Metal π -Acid Complexes; Magnetic Properties of Transition Metal Complexes
	CHEM – 422	Organic	Students will learn various synthesis and reactions of Heterocyclic compounds in this course. It will be

		Chemistry-II	very helpful for students to understand the importance of heterocyclic compounds and their application in the field of medicinal and pharmaceutical sciences to get the jobs opportunities in chemical industries.
	CHEM – 423	Physical chemistry- II	In this course, students get to learn Basic concepts of quantum mechanics, role of quantum chemistry in study of microparticles, deep theoretical knowledge of wave in the universe; Theoretical concept of MO, VB theory, evaluation of bond order and charge density and its applications; Important aspects of statistical thermodynamics
	CHEM – 424	Laboratory Course in Organic Chemistry	In this organic practical course, the students will get familiarised with the synthesis of organic molecules, extraction of natural products, TLC and column chromatography. This organic practical work will be very helpful to students to get job opportunities in chemical industries and research studies in the organic field.
III	CHEM – 531	Inorganic Chemistry-III	After studying this course, students will have an understanding of Synthesis and structure of organometallic complexes; Different homogeneous catalytic pathways; bonding and structures of Inorganic cages comprising of different non-metals such as boron, phosphorous, silicon, etc. and metal clusters such as Zintl clusters etc; chemistry of various non-aqueous solvents such as liq. NH ₃ , liq. SO ₂ etc.
	CHEM – 532	Organic Chemistry-III	In this course, the students will learn various applications of spectroscopy (IR, NMR, Mass) in organic molecules, which will be very helpful in the analysis and characterization of organic molecules in the future. This will be very helpful to students to get job opportunities in chemical industries.
	CHEM – 533	Physical chemistry-III	In this course, Students will learn from the solid-state chemistry how the colour arise and the role of conductors and superconductors; Importance of electrolytes, basic and fundamentals theories of electrochemistry; Students will have in-depth knowledge of various spectroscopy- microwave, rotational, vibration-rotational, Raman; ESCA and Auger spectroscopy impart the knowledge of the surface composition of a compound

	CHEM – 534	Analytical Chemistry	Students will learn about different thermal techniques and their applications; Basic understanding about Chromatography; Knowledge on NAA, carbon dating and fundamentals of Atomic absorption spectroscopy and their applications; Students will acquire thorough knowledge on various magnetic susceptibility measurement techniques such as Faraday's method and various electrochemical analytical techniques, viz. polarography, cyclic voltametry etc.
	CHEM – 535	Laboratory Course in Physical Chemistry	Students will have in depth understanding of both theoretical and practical aspects of certain relevant topics of physical chemistry; Students will acquire the skills to prepare solutions of desired concentrations, percentage, etc and handling of instruments; Students will have practical knowledge and skills to develop and perform experiments, analyze and interpret data to bring to a logical conclusion
IV	CHEM – 541	Inorganic Chemistry-IV	Students will acquire advanced knowledge on nuclear chemistry, viz. models of nuclear structure and stability; In-depth knowledge on photochemistry of Inorganic complexes will be acquired by the students; Students will learn structure determination of Inorganic compounds by various spectroscopic techniques such as IR, Raman, UV-Visible, Mössbauer, and NQR.
	CHEM – 542	Organic Chemistry-IV	Students will learn various Organic synthesis reactions in this course. It will be very much helpful for students to understand organic synthesis by using various reagents and reaction mechanisms. This course will be very helpful to students to get job opportunities in chemical industries and research studies in the organic field.
	CHEM – 543	Physical chemistry- IV	Students will have an understating of the importance of electrode, electrical double layers, how corrosion arise and its prevention, fuel cells; Properties of the surface of liquids, how bubbles and drops are formed and the role of absorption and adsorption; Various aspects and applicability of the surfactants in industry; Fundamental and theoretical aspect of NMR, ESR or EPR

	CHEM - 544 A/B/C	CBCP (Choice Based Credit Paper)	Choice Based Credit papers such as biological and medicinal chemistry, environmental, green and sustainable chemistry, polymer and nano chemistry are very relevant areas of study which have current applications in both research and applied chemistry.
	CHEM – 545	Project Work (CBCP)	Project Work allows students to get research exposure to different research areas of the faculty members which gives them an idea to plan for their future research endeavours

Department of Environmental Science

Programme Outcomes

Knowledge: The course will provide information in the fundamental and cutting-edge areas of the basic and applied disciplines of environmental science so that the students can have a comprehensive understanding of the relevant subjects to satisfy their professional needs.

Effective Communication: Through the course, it is anticipated that students would acquire excellent communication skills for conveying general and scientific information connected to environmental science in a concise and straightforward written and spoken way, as well as for compiling in the form of scientific reports with the scientific community and with general public.

Research Aptitude: The study of research-based learning, including experiment design, analysis, and data interpretation in order to draw conclusions, will help students strengthen their analytical reasoning, critical thinking, and research skills. Further, using advanced instrumentation techniques; the student will be able to apply analytical skills and effective problem-solving approaches in the core fields of environmental science.

Problem Solving: The course will prepare the students to build creative, solution-focused approaches to solving scientific and other challenges. The students will be competent to recognise environmental issues and offer ethical, scientifically sound solutions.

Ethics and Leadership: In addition to instilling leadership traits and teamwork abilities, the course will make students aware of strong ethical principles for both their professional and personal lives.

Skills and Inferential knowledge: The students will be able to use and learn modern tools, techniques, and abilities for scientific procedures. Using various descriptive and inferential statistical tools and approaches, students will acquire the ability to adapt to a changing scientific environment in the process of sustainable development.

Specialization and Employability: The course will train students for an entrepreneurial mindset and career-oriented attitude in research as well as in industries by providing them with hands-on training, field trips, project-based research training, and specialisation.

Programme Specific Outcomes

The MSc programme aim to produce skilled and employable human resources in the field of Environmental Science and allied disciplines that possess:

- A potential to articulate the interconnected and interdisciplinary nature of environmental studies and be able to communicate complex environmental information to both technical and non-technical audiences;
- A fundamental perceptive of environmental science principles and their application to environment management, conservation, resource exploitation, international climatic issues, mitigation measures, sustainable development and related issues.
- A competence to amalgamate hypothesis, technical knowledge and appropriate procedures in effectively analyzing and solving environmental degradation, resource depletion, climate change, urban sprawling and other related problems.
- Proficiency to reflect critically on their roles, responsibilities, and identities as citizens, consumers and environmental actors in a complex, interconnected world.

Course Outcomes

Semester	Course No.	Course Name	Course Outcomes
I	ES 101 (CP)	Basics of Environmental Science	<ul style="list-style-type: none"> -Ability to demonstrate comprehensive understanding of the environment, environmental processes, theories and ethics. -Ability to describe the mechanisms of interactions between different spheres of environment. -Ability to recognize and describe how about resource management and sustainability
	ES 102 (CP)	Environmental Chemistry	<ul style="list-style-type: none"> -Develop concepts of basic chemistry associated with the occurrence of environmental pollutants. -Understand various chemical constituents present in air and water, interactions among them and manner in which changes are brought about due to pollution. -Analyze the toxic chemical behavior in environmental. -Familiar with the latest green chemistry principle and applied in daily life for pollution reduction
	ES 103 (CP)	Environmental Biology	<ul style="list-style-type: none"> -Understand the fundamental principles of various subjects in context of environmental related studies. -Gain a thorough understanding of the applications of microbiology and biotechnology, as well as strategies for environmental protection. -Understand the integrative approach to developing sustainable solutions to address environmental issues. -Ability to examine bioethical concerns relating to the safe handling of genetically modified crops and think critically for the

			production of biodegradable and environmentally friendly products
	ES 104(CP)	Earth Science & Hazards	<ul style="list-style-type: none"> -Understand the geophysical processes as the drivers of different types of hazards. -Appreciate how human activities interface with the geophysical processes in causing and/or accentuating natural hazard. -Learn the mitigation approaches, their choices and alternatives. -Develop foundations for hazard, risk and vulnerability assessment
	ES 105 (CP)	Practical – I	<ul style="list-style-type: none"> -Accustom with application of meteorological instruments -Learn culturing and identification of microbes using the basic and advanced tools -Understanding of laboratory techniques applied for conservation of biological resources -Estimate the pollution levels in water, wastewater and soil
II	ES 201(CP)	Environmental Pollution	<ul style="list-style-type: none"> -Develop the ability to identify and quantify the magnitude and intensity of Environmental pollution problems. -Ability to undertake environmental sampling and analysis with respect to air, water and noise pollution. -Ability to suggest the environmental control /management plan for environmental pollution problems
	ES 202(CP)	Ecology and Environment	<ul style="list-style-type: none"> -Ability to demonstrate sound understanding on scientific inquiry in the field of modern ecology. -Ability to structure and functions of ecosystem. -Ability to examine the main limitations/ stress on patterns of productivity, energy flow through natural food webs, and ecosystems

			<p>dynamics.</p> <ul style="list-style-type: none"> -Ability to set up basic and advanced ecological sampling techniques in different ecosystems.
	ES 203(CP)	Earth Surface Processes	<ul style="list-style-type: none"> -Understand the basics of the Earth's structure, composition and evolution of landforms -Analyze the effects of meteorological parameters on the dispersion of pollutants -Understand and apply the basic concepts of meteorology, climatology and oceanography for solving relevant environmental issues. -Identify the issues related to climate change, understand reasons and recommend remedial measures
	ES 204(CP)	Environmental Management	<ul style="list-style-type: none"> -Gain information on the leading waste-to-energy technologies -Development of building skills for making decisions. -Understand national and international environmental regulations and laws. -Ability to design various experiments for reducing the pollution load
	ES 205(CP)	Practical – II	<ul style="list-style-type: none"> -Illustrate the different physico-chemical analysis of water, wastewater and soil and apply the appropriate method of physico-chemical analysis to research and field applications. -Estimate the pollution levels in water, wastewater and soil -Ability to examine the structure, functioning, and processes of different ecosystems. -Apply techniques for qualitative and quantitative sampling of plant diversity -Design scientific methods/experiments to study

			various ecological parameters and biodiversity in laboratory/field conditions
III	ES 301(CP)	Meteorology & Climatology	<ul style="list-style-type: none"> -Ability to demonstrate sound understanding of the atmosphere and climate as integral part of the physical environment. -Ability to appreciate the interaction between earth and atmosphere system, particularly the microclimate -Ability to integrate and use meteorological knowledge in the matrices of environmental research
	ES 302(CP)	Biodiversity Conservation	<ul style="list-style-type: none"> -Ability to demonstrate sound understanding on importance of biodiversity. -Ability to analyse the sustainable utilization and conservation. -Ability to critically analyse the socio-cultural dimensions and broad legal framework for conservation of biodiversity -Ability to develop new conservation strategies for new or endangered species in a specific area.
	ES 303(CP)	Analytical Methods	<ul style="list-style-type: none"> -Understand the problem and identify suitable techniques to analyze the environmental samples. -Explain and use suitable sampling methods for collection of different samples to perform physical, chemical and biological characterization of environmental pollutants. -Appraise the principles, working and applications of the instrumental techniques used for analysis of physical, chemical and biological entities. -Differentiate between the various analytical methods and capable to design method required for quantitative and qualitative analysis of environmental

			components.
	ES 304(CP)	Practical III Industrial Visit/ Field Work and Report Writing	<ul style="list-style-type: none"> -Applications of GIS and Remote sensing techniques -Apply techniques for qualitative and quantitative sampling of plant diversity -Analyze the structural and functional components of a population as an ecological entity. -Explain the concept of the biological community, as well as its alterations and interactions. -Ability to work and find solutions to the matters of environmental concerns. -Ability to demonstrate creative and leadership qualities and build team spirit to take up question of environmental cause.
IV	ES 401(CP)	Energy & Environment	<ul style="list-style-type: none"> -Ability to understand the basics of renewable and non-renewable energy resources and associated environmental issues. -Ability to understand the global, regional and local initiatives for energy conservation and sustainable development -Ability to understand about various non-convention sources of energy -Ability to understand possible ways for conservation of energy resources.
	ES 402 (CP)	Research Methodology	<ul style="list-style-type: none"> -Ability to explain key research concepts and complex issues inherent in selecting a research problem to a specific research project. -Learnt various research designs, data collection techniques, developed skill to select an appropriate research design,

			<p>methodology and implementing a research plan.</p> <ul style="list-style-type: none"> -Ability to apply suitable statistical approaches to research studies and its limitations. -Ability to deliver and write research proposal/thesis and manuscript preparation, and to communicate effectively in the scientific community of their academic discipline. -Recognize research integrity and ethical norms
	ES 403.A (CBCP)	Remote Sensing & GIS	<ul style="list-style-type: none"> -Building the foundation for understanding Remote Sensing and Geographic Information System (RS-GIS) as a powerful tool for geospatial analysis -Learn about data and sources (RS based and other sources, field data) and GIS software. -Develop capability to handle at least one GIS software with understanding. -Obtain basic capability in skills and functional knowledge to carry out GIS (RS-GIS) based projects.
	ES 403.B (CBCP)	Wildlife & Conservation Biology	<ul style="list-style-type: none"> -Ability to apply the knowledge for biodiversity -Ability to comprehend the principles of ecosystems and evaluate them against actual life activities. -Ability to develop innovative conservation strategies for newly discovered or endangered species in a specific area, and interpreting ecological and social events from the perspective of biodiversity
	ES 403.C (CBCP)	Environmental Health and	<ul style="list-style-type: none"> -Ability to demonstrate sound understanding of the concept of Environmental Chemistry and

		Toxicology	<p>Environmental Toxicology</p> <ul style="list-style-type: none"> -Ability to Summarize the most relevant terms, principles, and methods in environmental toxicology -Ability to recognize the importance of environmental changes and understand various aspects of environmental pollutants and its implications on human health
	ES 404	Project Work and Dissertation Seminar	<ul style="list-style-type: none"> -Develop ability to undertake field and laboratory experiments in a systematic way -Ability to work independently on a scientific question and arrive at a conclusion. -Enhance capability to interacting intellectually in a seminar through informal and formal speaking. -Improve skills and abilities to enhance employability

Department of Forestry

Programme Outcomes

Following completion of P.G. the students will have a comprehensive overview of Forestry. The student fraternity will be acquainted with the fundamental concepts in the discipline of Forestry. Cardinal focus is on Silviculture, Forest Mensuration, Forest Protection, Forest Ecosystems, Ecosystem Services, Forest Working Plans, Forest Management, Wood Chemistry, Forest Industries, Wildlife and Conservation Biology, Forest Utilization, Forest Bio-energy, Medicinal Plants, Forest Biotechnology etc.

The students will learn about biodiversity assessment, population structure studies, forest mensuration (tree measurements), biochemical (carbohydrate, protein, and lipid estimation), proximate analysis of biomass, biofuel synthesis, preparation of concoctions and decoctions, phytochemical and biochemical assays etc. which will enable them to have a sound practical foundation.

Special papers such as Forest Bio-energy, Forest Biotechnology and Medicinal & Aromatic plants will enable students to comprehend research problems from a higher perspective, besides setting the foundation for futuristic research. The 72 credit course will be conducive for students aspiring for competitive examinations such as NET, IFS (UPSC), Forest Services (state public service commission) etc.

Programme Specific Outcomes

- Students will have a very strong foundation pertaining to reconnaissance surveys and field surveys
- Students will be able to conduct biodiversity assessment studies in a particular area
- Students will have some foundation in Plant Taxonomy
- Students will have some foundation in biochemical assays
- Specific courses such as Forest bioenergy will enable students to have hands on training on biomass characterization, biomass processing, biochemical conversion (biodiesel synthesis) and thermo-chemical conversion (pyrolysis) etc.
- Specific courses such as Medicinal & Aromatic Plants will enable students to scientifically document plants with therapeutic potential (inventory), preparation of medical concoctions, and decoctions, anti-microbial and phyto-chemical assays etc.
- Papers as mentioned in Point No 5 & 6 would furnish a suitable platform to the aspirants for pursuing doctoral research in the specific (aforementioned) as well as allied disciplines.

Course Outcomes

Total Marks=1800		Credit=72	
Semester	Course No.	Course Title	Course Outcome
I	FS-101	Silviculture	Students will have in-depth idea about Silviculture and its scope. They will learn about the forest ecosystems, forest regeneration, silvicultural systems in addition to the Silviculture of Indian trees
	FS-102	Forest Mensuration	The students will have in-depth knowledge of the scope of forest mensuration, tree height measurements, measurement of weight and biomass, GIS and Remote Sensing in Forestry based operations
	FS-103	Forest Management	The students will learn about the objectives of forest management and its scope, forestry organizations and their role in management of forest resources, forest certification, forest organization, yield regulations, forest working plans, private, public and commercial plantations etc.

	FS-104	Forest Products and Their Utilization-Chemistry and Industry	The students will learn about the various types of forest industries such as paper industry, match industry, sports industry, furniture industry etc. they will be able to perform SWOT analysis of the industrial forestry sector following completion of their course. They will also learn about various products of commerce from the forest sector such as resins, dyes, gums, pigments, katha, catch etc. Timber and non-timber based products have been specially taken into consideration in this paper in addition to lesser known timber species.
	FS-105	Practical - I and Field Study	Students will learn about various sampling techniques. They will be able to use a GPS, and interpret visual and digital images. They will have in-depth knowledge about cell wall components besides extraction procedures of the same (basically essential oils, resins, tannins etc). They will be able to identify important tree species and also assess their utility index
II	FS-201	Forest Ecology	Students will learn about the core concepts in Ecology. They will have in-depth knowledge on forest ecosystem, forest diversity indices, genetic diversity, forest productivity, forest types, ecological succession etc.

FS-202	Biodiversity Conservation	The students in this paper will learn about the core concepts in biodiversity, biodiversity levels, ecosystem diversity etc. They will have sound knowledge on hotspots, national parks, wildlife sanctuaries etc. Additionally, they will have in-depth knowledge on climate change, biodiversity conventions, ecosystem services, germplasm conservation, quarantine laws and genetic exchanges, Intellectual Property Rights etc.
FS-203	Forest Resource Management and Economics	The student will have knowledge on production economics, micro-economics, market and marketing, capital in forests, forest god valuation, international trade in forest products, forest certification, financial and economic consideration etc.
FS-204	Forest Protection and Integrated Pest Management	The student will have in-depth idea about the diseases of forest trees and their management. They will be acquainted with Integrated Pest Management approaches for dealing with pest infestations.
		Forest fires, wood degradation, weed management, wildlife damage to plantations etc. are some of the other thrust areas in this paper.
FS-205	Practical - II and Field Study	This paper will furnish practical knowledge on measurement of biomass productivity, vegetation analysis, pest-specimen collection approaches, assessment of forest community structure, biodiversity indices, herbarium preparation etc.

III	FS-301	Forest Policy, Laws and International Conventions	This paper will acquaint the student fraternity with the various policies undertaken by the Ministry of Environment, Forest and Climate Change in addition to various international conventions (specifically addressing the biodiversity issues)
	FS-302	Forest Biotechnology and Tree Improvement	This paper will enable students to learn the various plant breeding techniques. The students will be taught to carry out mutation breeding. Biotechnological (tissue culture, molecular biology and genetic engineering) approaches for tree improvement will be further dealt in this paper.
	FS-303	Wood Science and Technology	The students will learn about the structure, properties and chemical composition of wood. They will learn about the various wood seasoning and wood preservation techniques. They will be further acquainted with the various wood biomass conversion techniques (destructive distillation, pyrolysis, bio-refining etc.). The students will have solid foundation on energy and commercial forestry upon completion of this paper.
	FS-304	Practical-III and Field Study	This paper will furnish practical knowledge on properties of wood, ultimate and proximate analysis of woody biomass, wood boring
			insect (identification and collection), preparatory breeding experiments, plant genetics experiments and software usage in data analysis for forestry based operations/studies.

IV	FS-401	Forest and People	This paper will educate the student fraternity about the importance of forests, socioeconomic benefits of forest resources, livestock economy, various afforestation programs, man-animal conflicts, tribal economy, forest rights, ecotourism, community based forest management etc.
	FS-402	Wildlife and Conservation Biology	This paper will provide in-depth knowledge to the students about the basics of wildlife, its significance, and the various diseases of wild animals, community participation in wildlife management, ecological monitoring, eco-development, wild life census and wildlife trade. The paper will additionally provide knowledge on various conservation projects undertaken by the Central Govt.
	FS-403	*CBCP A.Medicinal and Aromatic Plants	This special paper deals with many important aspects in Medicinal Plants such as documentation of plants with therapeutic potential, natural products, good collection practices, high value bio-actives from plants and their extraction. The paper also deals with the ethnobotany and ethnomedecine. Alternative therapy such as aromatherapy have been given special importance in this paper.
		B.Forest Biotechnology	This paper focuses specifically on the applied aspect of modern forestry. Upon completion of this paper the students will have an in-

			depth understanding of the core concepts in Plant Biotechnology & Genetic Engineering and their implications in the forestry sector. Additionally, the paper also focuses on Intellectual Property Rights (IPR).
		C. Forest Bio-energy	This special paper will provide indepth knowledge to the student on the core concepts of Bio-energy. The student will learn about biomass production (commercial & energy forestry approaches), biomass stock assessment studies, biomass/feedstock selection and characterization, approaches to convert solid biomass to liquid and gaseous fuels, biomass value addition, platform bio-refineries etc.
	FS-404	Project Work and Seminar	The project dissertation work will enable the student fraternity to learn about the various research/experimental approaches used in the subject domain. The dissertation work besides providing the fundamental concepts in the specific subject area will furnish a solid platform for futuristic doctoral research.

Department of Geography

Programme Outcomes

- To impart knowledge for understanding the holistic relationship between man-environment. To reason the problems and issues emerging out of it and to approach the challenges with a rational outlook and manage the resources.
- To inculcate the values and knowledge needed to lead a good quality of life. To advocate and develop a nature for sustainability.
- To foster and sharpen the tools and techniques of analysis, interpretation and understanding as well as incorporation of new technological innovation for developing a better environment.
- To ventilate issues and question pertaining to geographical, resource planning and to help in achieving sustainable development.
- To initiate career oriented professionals who can be role models in empathy and are committed to social concerns.
 - To prepare the students for their professional development and career in exams such as UPSC, NPSC, UGC NET. CSIR NET etc.

Programme Specific Outcomes

1. The syllabus has been tailored to meet the students professional and career advancement ambition pertaining to research/academic as well as administrative role.
2. Students after the course will develop specific set of skills in interpreting the geomorphic processes, climatology, economic, social, application of remote sensing and GIS etc. and also acquire a greater understanding of man-environment relationship.
3. The students will be trained for leadership quality through classroom public speaking, critical thinking, good communication skill etc., as the students will be exposed to power point presentation, seminars, book reviews, paper review assessment etc.
4. A course on research methodology and dissertation course will be chiefly targeted towards building interest in academics.
5. The students will be prepared to undergo future research programmes after completing the dissertation paper. The dissertation research work is a step to hone the student's skill in analyzing and evaluating the socio-economic and environmental challenges.
6. Soft skill and ability enhancement courses like remote sensing and GIS in their syllabus will help the students to be at par with the other students also build a career in allied disciplines.

Course Outcomes

Semester	Course No.	Course Name	Course Outcome
I	GEOG 101 (CP)	Geomorphology	<ul style="list-style-type: none"> -To introduce the students to the basic and latest concepts in Geomorphology. - To understand effective understanding in geomorphic processes and forms. -To introduce the students the application of Geomorphology in different regions and environment. -To make the students knowledgeable in the geomorphology of Nagaland.
	GEOG 102 (CP)	Economic Geography	<ul style="list-style-type: none"> -To make the students acquire knowledge of the fundamental and modern issues in Economic Geography -To gain in-depth knowledge of the concepts and approaches; classification of economic activities and their changing trend; theories of economic development. -Develop knowledge on geographical aspects of economy; types of economic activities. -Conceptualize, demarcate and analyze the geographical determinates of agriculture and manufacturing activities to understand the factor causing market network. -Inculcate the knowledge of changing dynamics in the industrial and to explore the potentiality of economic development in NE India and Nagaland.
	GEOG 103 (CP)	Regional Geography of India	<ul style="list-style-type: none"> -To understand india in terms of regional division based on physical, social etc. -To make the student aware of the magnitude of problems and Prospects of the population distribution in India. -To help the students to understand growth of India. -To study the geography of NE India especially its geology, demography, drainage etc..
	GEOG 104 (CP)	Geographical Thought	<ul style="list-style-type: none"> -To acquire concepts in geographical thoughts through classification of sciences. -To understand the different school of thoughts, the dualism in Geography, concept of region. -To study the contribution of different scholars during ancient, medieval and modern period. -To critically evaluate the nature of geography as spatial science with changing space and time
	GEOG 105 (CP)	Cartographic and Quantitative	<ul style="list-style-type: none"> -To introduce the Students with profile making and to acquire the knowledge of Survey of India Toposheets Reading/Interpretation

		Techniques (<i>Practical</i>)	<ul style="list-style-type: none"> -To familiarize the students with the weather instruments and their applications in Geographical phenomena. -To appraise the students in analysis of socio-economic data and its interpretation -To train the students in quantitative techniques as an essential part of geography -To study types of sampling and also to study the different techniques under central tendency and dispersion measures.
II	GEOG 201 (CP)	Climatology and Oceanography	<ul style="list-style-type: none"> -To introduce the students to principles and concepts in Climatology and Oceanography -To acquaint the students with the applications of heat balances, atmospheric disturbances and ocean resources -To make the students aware of the ocean polity and economic significance. -To study the application of geospatial applications under oceanography and climatology.
	GEOG 202 (CP)	Biogeography	<ul style="list-style-type: none"> -To appraise the students about the development of biogeography. -To study the forms and functions of biogeography. The palaeobotanical and palaeoclimatological nature of environmental changes in India. -The distribution patterns of the plants and animals and the processes involved focusing on its development and content. -The concept of conservation processes in India. The National Forest Policy in India and the problems of pollution and environmental hazards.
	GEOG 203 (CP)	Political Geography	<ul style="list-style-type: none"> -Students will learn about the different school of thoughts. -Heart land and Rimland theory will be discussed along with the global strategic positions -Geopolitics of world, India and Nagaland will be taught. -India Federalism and the ways and means of confidence building for conflict management will be taught.
	GEOG 204 (CP)	Remote Sensing and Geographical Information System	<ul style="list-style-type: none"> -The Students will gain knowledge on Remote Sensing of the environment, interaction of EMR with earth surface features its characteristics. -The students will be made to earn different sensors and satellite imageries. The different Visual Image Interpretation elements will be described. -Students can efficiently assess the scientific

			<p>principles of Remote Sensing Techniques and observe and apply satellite based remote sensing data.</p> <p>-Various components of GIS like structure of GIS; data input; verification, storage and output in GIS will be taught.</p>
	GEOG 205 (CP)	Remote Sensing Techniques and Computer Cartography (<i>Practical</i>)	<p>-The students will be appraised about the application of air photo techniques in Geography.</p> <p>-Interpretation of various application of remote sensing such as forest mapping, landuse landcover mapping will be carried out.</p> <p>-Different types of hardware and software in computer cartography will be described.</p> <p>-Generation of point line and polygon for application of remote sensing will be demonstrated to the students.</p>
III	GEOG 301 (CP)	Natural Resources Management	<p>-Students will be taught the model and approaches to Natural resources management .</p> <p>-Prospect of soil, water, mineral and forest will be appraised to the students.</p> <p>-The students will be made aware about the use of remote sensing and GIS for resource management application.</p> <p>-Resource conservation and management methods, principles and approaches.</p>
	GEOG 302 (CP)	Regional Planning and Development	<p>-Students will identify concepts of region, regionalization and regional planning; theories on recent development; concept on inequality and regional disparity.</p> <p>-The students will delineation formal and functional region.</p> <p>-Identify the challenges and opportunities of regional development.</p> <p>-Analyze role of village councils and village development board in Nagaland.</p> <p>-The concept of multi level planning and indicators of development will be discussed to the students.</p>
	GEOG 303 (CP)	Geography of Resources	<p>-Students will be taught the relation between man and nature. The resource creating factors will be discussed to the students.</p> <p>-Soil, water and forest profiles will be studied and its management and conservation discussed.</p> <p>-Mineral classification such as coal, petroleum etc. will be discussed.</p> <p>-The developmental disparities between various regions and why it occurs will be illustrated.</p>

			-Special emphasis on Northeast India mainly Nagaland will be appraised to the students.
	GEOG 304 (CP)	Geography of North East India	-To familiarise the students with Northeast India physiography setting, drainage network, climate etc. -Population of each state will be studied along with its ethnic and cultural groups. -Developmental issues such as border issue, inter and intra migration, human and physical resource disparity will be taught. -Specific region in Northeast India like the Brahmaputra valley, NEC, Naga hills etc., will be taught and students highlighted about NE India.
	GEOG 305 (CP)	Field Work: Physical / Socio-Economic Survey (<i>Practical</i>)	-Physical survey or Socio-economic survey will be undertaken to prepare the students for ground truthing. -The techniques of data collection before field visitation will be the main highlight of the practical. -The report to be submitted with the paper will be explained through illustrations like maps, graphs, photographs, images etc., - A national study tour will be undertaken and report submitted for evaluation
V	GEOG 401 (CP)	Dissertation	-Each student will be assigned a topic for carrying out the dissertation paper. -The students will be appraised of the literature review, methodology, field collection techniques etc in this paper. -The outcome of the paper is to prepare the students for research programs.
	GEOG 402 (CP)	Research Methodology	-The motive of the paper is to train the students for undertaking research activities. -The various objectives and characteristics in research methodology will be discussed. -The steps and design to be carried out will be taught to the students. -Research findings, abstract and report writings, preparing questionnaires, recent trends in geography will be explained to the students.
	GEOG 403 (CP)	Geography of Tourism	-To acquaint the student's basic concepts of Geography & Tourism. -To familiarize the students with the utility and application of Tourism. -To help the students & society to understand the interrelationship between tourism and

			<p>employment generation opportunities.</p> <p>-To explain the development in tourism specially with cultural and eco-tourism in NE India.</p>
	GEOG 404 (CP)	Regional Geography of South East Asia	<p>-Physical features in Southeast Asia will be taught to the students.</p> <p>-Various demography study such as- composition of population, cultural and linguistic group will be studied.</p> <p>-Role of ASEAN and its role in Act east policy will be addressed.</p> <p>-The students will be appraised about the development of SE Asia as n emerging global economic powerhouse.</p>
	GEOG 405 (CBCP)	Hydrology	<p>-To introduce the students to the scopes and sub branches of hydrology.</p> <p>-To highlight the hydrological cycle and man's interference.</p> <p>-The morphology of water, ground water types and water quality will be explained in detail.</p> <p>-The application of remote sensing and the principles of water balance will be explained.</p>
	GEOG 406 (CBCP)	Population Geography	<p>-To appraise clear concepts of population geography and demographic studies to the students.</p> <p>-Greater understanding of nature, scope and evolution of population geography through spatial and temporal frameworks.</p> <p>-The population dynamics; world population and development with special reference to India will be discussed.</p> <p>-Human development indices and India's population policies will be discussed.</p>

	GEOG 407 (CBCP)	Cultural Geography	<ul style="list-style-type: none"> -The students will be introduced to the different cultural elements. -The ethnic groups and tribal groups will be discussed. Pattern of livelihood especially in terms of economic activities and adaptation of culture will be appraised. -The pattern of rural and urban society and the social processes taking place will be introduced to the students. -The relationship between cultural pattern in living and economic development will be delineated.
	GEOG 408 (CBCP)	Agricultural Geography	<ul style="list-style-type: none"> -To introduce students to agricultural activities and its relation with Geography. -To familiarize the students with new technological applications and their agricultural land use. -To enable students to apply previously known knowledge in problems and prospects in agriculture. -To discuss the different agricultural theories such as Von Thunen and Whittlesey's classification will be appraised to the students. -Shifting cultivation, environmental degradation and the role of insecticides, fertilizers etc., will be highlighted and appraised to the students.
	GEOG 409 (CBCP)	Application of Remote Sensing, GIS and GPS in Geography	<ul style="list-style-type: none"> -To highlight the principles of remote sensing. -To introduce the application of remote sensing for forest, water, geohazard, land use mapping to the students. -Application of GIS for water and ground water studies, watershed management and analysis, ground water potential mapping. -To highlight the GIS application on NE India region especially for Nagaland to the students.

Department of Mathematics

Programme Outcomes

- Students will develop a strong foundation in Mathematics capable of competing with their contemporaries in the country.
- Students will attain the ability to identify, analyse and propose solutions to problems in Mathematics.
- Students will be motivated and prepared to pursue higher studies and research in Mathematics.
- Students will be encouraged to dispense their professional and ethical responsibilities.
- Students will develop confidence for self-education and ability for lifelong learning.
- Students will get adequately equipped to perform well in competitive exams such as UGC-CSIR NET and GATE.

Programme Specific Outcomes

- Students will learn and understand the generalization of the concepts of analysis on \mathbb{R} to general metric spaces and further on to topological spaces.
- Students will grow familiarised with higher branches of algebra such as ring theory, commutative algebra and Galois theory.
- Students would be able to learn and appreciate the correlation and unification of varied branches of mathematics at higher levels of the subject.
- Students would be able to execute numerical computations using computer programming languages.

Department of Physics

Programme Outcomes

A student who has completed MSc physics programme creates a comprehensive scientific knowledge, and this knowledge will help to understand, explain, and to solve advanced scientific problems.

- An adequate level of physics knowledge transmitted through courses in the basic curriculum covering the following topics: Classical Mechanics, Electromagnetic theory, Quantum mechanics, and Statistics
- When a student has a solid grasp of the fundamental ideas and is equipped with critical thinking skills, they are able to understand mechanics and electronics.
- Possess expertise in a variety of optical spectroscopy techniques, including the use of spectrometers and the interpretation of IR, Raman, electronic absorption, and fluorescence spectra.
- By practicing problem-solving skills and improving the ability to understand breakthroughs in emerging physics research areas and through exploratory work, project work, research seminars, and other activities.
- To use cutting-edge computer technology to forecast and model complex physics problems using current experimental and theoretical physics tools.

Programme Specific Outcomes

On completion of the course the students will be able to explain the wide range of physical phenomena:

- Recognize and apply the fundamental physics concepts and interaction laws that control our universe.
- Show the ability to solve physics related problems and demonstrate the physics phenomenon through experiments.
- Well qualified to pass national and state-level qualifying exams for graduate and post graduate level research and teaching.
- The information learned in the course will also enable the students to pursue their higher education and to use their knowledge to enter the R&D and industrial sectors.

Department of Zoology

Programme Outcomes

- The program has been designed to provide in-depth knowledge of applied subjects, ensuring the inculcation of employment skills in diverse fields. This will provide them with ample opportunities to explore different career avenues.
- On completion of the programme, the students will be well-versed in the concepts of classical zoology and its applied aspects.
- Apart from knowledge of animals and their behaviours, the students will be abreast of the latest concepts in cell biology, immunology, molecular biology, genetics, biochemistry, developmental biology, and physiology.
- Moreover, skills acquired in both the theoretical and practical aspects, as well as field studies and excursions, will imprint the concepts of teamwork for life outside of academia.

Programme Specific Outcomes

- The program will enhance the chances of students to progress to higher education like MSc, BEd and Ph.D. The other dimension is that the programme is versatile enough to ensure that students are successful in different competitive examinations.
- They will have acquired complete knowledge of disciplinary as well as allied biological sciences, like practical skills in analytical biochemistry, biotechnology, biostatistics, bioinformatics, genetics, molecular biology, microscopy, enzymology etc. As a result, they will have the expertise that will give them a competitive advantage in pursuing higher education in India or abroad, as well as qualify them for jobs in academia, research, industry, and administration.
- Some job avenues they would be particularly well suited for would be as scientists in the drug development industry, clinical and research laboratories, animal behaviourists, conservationists, wildlife biologists, zoo curators, wildlife educators, forensic experts, lab technicians, veterinarians, etc. This is apart from avenues like the Indian Forest Service and other allied services like Governmental Environmental Agencies etc.
- Skill enhancement courses like aquaculture, sericulture, and apiculture will help them in starting their ventures and generating self-employment making them successful entrepreneurs.

Course Outcomes

Semester	Course No	Course Name	Course outcome
I	ZOO -101	Biological Chemistry	<ul style="list-style-type: none"> • Students will understand the basic and fundamental biochemistry of carbohydrates, proteins, lipids and nucleic acids. • Students will also learn about oxidative phosphorylation and redox reactions. • Students will also understand the nature, mechanism, and kinetics of enzyme action, structure and properties of biomolecules, metabolic and biochemical processes. • Students can correlate the changes in the levels of these biomolecules with diseases in humans.
	ZOO-103	Endocrinology & Reproductive Biology	<ul style="list-style-type: none"> • Students will be able to explain the endocrinological processes in mammals. • Students will be able to illustrate the reproductive cycles with hormonal control and related endocrine disorders.
	ZOO-105	Parasitology & Entomology	<ul style="list-style-type: none"> • Students will be able to define the basic terms in parasitology, enlist common ectoparasites and endoparasites and explain animal associations and their types. • Students can correlate the life cycle and importance of major parasites. • Students will be able to illustrate transmission routes of animal and zoonotic parasites • Students will be able to explain the social organization of insects with examples, and illustrate the role of household insects in relation to human health. • Students will learn details about taxonomy and biology insect pests as well as their interactions with crops and their management policies in detail.
II	ZOO-201	Genetics & Developmental Biology	<ul style="list-style-type: none"> • To impart knowledge of how organisms evolved focusing on genetic variation and inheritance. • Students will learn the patterns and process of embryonic developments, fate map, body plan, implications of developmental biology in various fields, such as teratogenesis, stem cell biology, <i>in vitro</i> fertilization, cryopreservation etc.
	ZOO-203	Animal Physiology	<ul style="list-style-type: none"> • Students will know the physiology of digestion, respiration, circulation, excretion and adaptation. • Students will be able to understand the basic terms in physiology, physiology of muscles, nerves, reproductive systems and bone.
	ZOO-205	Aquatic Biology & Fisheries	<ul style="list-style-type: none"> • Students will learn details about taxonomy and biology of fishes as well as various aquaculture techniques in details.

III	ZOO-301	Molecular Biology	<ul style="list-style-type: none"> • Students will acquire knowledge about the processes of DNA replication. • Students will learn DNA repair mechanisms and various molecular tools and techniques like PCR, southern, northern and western blotting, recombinant DNA technology etc. • Students will also know the various tools and techniques related to bacterial microbiology. Some aspects of applied microbiology and diseases related to microbiology will also be learnt by the students. • Students will learn the control of genes on body plan of organisms, molecular cloning and will apply it to understand genetic engineering techniques.
	ZOO-303	Cell Biology & Immunology	<ul style="list-style-type: none"> • Students will understand the structures and functions of cell and cellular organelles, and nuclear organization of prokaryotic and eukaryotic organisms. • To impart Knowledge on dynamism of bio membranes indicates the dynamism of life. Its working mechanism and precision are responsible for our performance in life. • To develop knowledge about structures and function of immune cells, immunoglobulins, antigens and their interactions with antibodies. • Students will know about MHC molecules, cytokines, hypersensitivity reactions and cellular mode of immunity development.
	ZOO-305	Biosystematics & Evolution	<ul style="list-style-type: none"> • Students will be learning the how living forms diversified, and how life originated on earth and factors which led to evolution. • Students will able to understand general taxonomic rules on animal classification and will apply it for species description. • Students will know about population genetics, human evolution, various concepts about origin of species, extinctions, phylogenetic tree making.
IV	ZOO-401	Tools & Technique in Biology and Biostatistics	<ul style="list-style-type: none"> • Students will understand the various aspects of biostatistics such as central tendency, t-test, chi-square, ANOVA, correlations and regression. • Students will acquire the knowledge of different techniques and principles used in biology.
	ZOO-403	Ecology and Behavioural Biology	<ul style="list-style-type: none"> • Students will be exposed to the fundamental features and aspects of population ecology, community ecology and ecosystem ecology. • Students will analyse and evaluate natural resource issues and act on a lifestyle that conserves nature. • Students will understand the impact of anthropogenic activities on the environment and will develop leadership skills to promote sustainability. • Students will learn the patterns of behaviours, survival strategies, social and cooperative behaviours, design of signals and chronobiology.

	ZOO-405 B	Applied Zoology	<ul style="list-style-type: none">• Students will be able to understand the hormonal role in estrus and menstrual cycles and also learn about ovulation processes, fertility control mechanisms.• Students will have deeper understanding on approaches of various human diseases through animal model specimens.• Students will be able to understand processes of fisheries, sericulture, along with crop pest management techniques• Students will gain knowledge about various disease related vectors and their impact on human• Students will be able to understand concepts of apiculture, poultry, dairy along with tissue and cell culture techniques
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Department of Political Science

Programme Outcomes

- To develop analytical and critical thinking among the students in the discipline of political science, its various branches and areas of studies.
- To acquaint the learners with concepts, theories and approaches concerning systems of governance, public policy, planning and administration, international relations, diplomacy, foreign policy and national and global institutions of governance.
- To prepare the students to deal with contemporary threats and challenges and build in them capacity and skills to convert threats and challenges into opportunities and to be the problem solvers.
- The courses have been designed to provide the student's academic freedom, flexibility and mobility within the discipline, across the disciplines within the country and outside the country.
- To prepare the students to become knowledge seeker as well as knowledge giver by taking them from the classrooms to the society and community as responsive, responsible and enlightened citizens.

Programme Specific Outcomes

- Students will get acquainted through field based studies on the working of administrative systems at the various levels.
- By undertaking study tours, the students will get exposure about policy making and parliamentary proceedings.
- The various courses will update the students on the various trends and development at the global level.

Course Outcomes

Semester	Course No.	Course Name	Course Outcome
I	PS: 101	Western Political Theory (Classical Traditions)	<ul style="list-style-type: none"> ▪ To familiarise the fundamental concepts of pre-modern statecraft. ▪ To understand the foundation of political theory and philosophy. ▪ It bridges between ‘past and present’ in the history of ideas.
	PS: 102	Political Processes and Dynamics in Indian Politics	<ul style="list-style-type: none"> ▪ To identify and comprehend the key issues those are central to plural society in India and understand how it impacts on India’s politics and political processes. ▪ To critically analyze the ideology and the organization of political parties in India. ▪ To familiarise with the working of political parties and the way party politics in India has taken shape under diverse social settings. ▪ The students will understand the functioning of judiciary in India and assess the challenges of national integration.
	PS: 103	Theories of Public Administration	<ul style="list-style-type: none"> ▪ The course will provide a comprehensive knowledge of the various administrative theories, models, methods and principles of public administration. ▪ Students will be able to comprehend the various administrative theories and principles which are used in practice in various organisations. ▪ Students will be able to develop various analytical and critical thinking to address various public issues or concerns. ▪ The course will help the students in preparing for various competitive exams.
	PS: 104	Theories of International Politics	<ul style="list-style-type: none"> ▪ To understand the basic concept and theoretical approaches in International Politics. ▪ To equip the students who would like to take International Relations as optional paper in competitive examinations. ▪ Benefited for those who would like to go for specialization in Foreign Policy.
II	PS: 105	Western Liberal Theories	<ul style="list-style-type: none"> ▪ To understand the modern values of state, citizenship and rights. ▪ To understand the ethos of modern statecraft. ▪ It also provides the foundation of modern society based on liberty and economic freedom.

	PS: 106	Issues in International Relations	<ul style="list-style-type: none"> ▪ It addresses contemporary International Politics covering all important aspects comprehensively. ▪ It also helps students who would like to take International Relations as optional paper in competitive examinations. ▪ It would be benefited for those who would like to go for specialization in International Studies and Foreign Policy.
	PS: 107	Politics of North-East India with special reference to Nagaland	<ul style="list-style-type: none"> ▪ To equip with the knowledge of the region, its history and politics, and the importance of it, in India's foreign policy. ▪ To get the knowledge about the state of affairs in Nagaland, the identity issues, the prospects and the development deficit in Northeast region. ▪ Active participation of a vibrant civil society is vital for check and balance to ensure quality governance. Therefore, quality participation is mostly achieved through a strong and good knowledge of the citizens, so the paper offers to fulfil that objective.
	PS: 108	Indian Administration: Problems and Prospects	<ul style="list-style-type: none"> ▪ The course will provide comprehensive knowledge about the evolution and growth of Indian administration. ▪ It will provide conceptual clarity about personnel system, different recruiting agencies, government policies and programmes. ▪ The course will equip the students with the knowledge and skills that are required to work in various administrative organisations. ▪ The course will help the students in preparing for various competitive exams.
III	PS: 109	Marxist Political Theory (Compulsory)	<ul style="list-style-type: none"> ▪ It encourages critical thinking and social engagement. ▪ It unfolds the complexities of class dynamics and inequality in a society. ▪ It also gives hope for an inclusive socio-economic and political transformation.
	PS: 110	Comparative Politics (Compulsory)	<ul style="list-style-type: none"> ▪ Political systems, aspire for a viable environment so efforts are directed towards management of public wants and needs and how the behaviour of the community impacts the political system, as contributed by David Easton in behavioural and post-behavioural concept. ▪ Karl Deutsch model of communication is one important component of the syllabus.

			<p>His book on the Nerves of Government gives a detail analogy between machines and human beings particularly political systems. No political system desire to decline rather all efforts are directed towards the health and survival of political system, for this reason students of comparative politics must imbibe the knowledge and importance of communication and its network, which Deutsch referred as nerves vital for the survival of every political system.</p> <ul style="list-style-type: none"> ▪ Democracy is a celebrated principle globally today but that cannot undermine the success story of communist country as well in that context China is taken as a case study in the paper so that student of comparative political analyst can give a broader insight as why some democratic countries in practice do not fulfil the democratic principles. ▪ The advancement in science and technology has shrunked the world today so there is a greater urgency to understand the extra-societal environment its pros and cons vis-à-vis once own impact on global political environment. Thus, this paradox has made a student of politics more relevant to know the dynamics of comparative politics.
PS: 111	International Organisations		<ul style="list-style-type: none"> ▪ The students will have a comprehensive knowledge about the International Organizations. ▪ They will understand how United Nations operates. ▪ How various issues are sorted out at international level? ▪ They also learn the various Regional Organizations that address the regional issues. ▪ This is a dynamics paper, therefore the students learns the contemporary international issues in relation with UN Charters.
PS: 112	Foreign Policy of India		<ul style="list-style-type: none"> ▪ Students will learn about India's diplomatic manoeuvres in an essentially interest and power seeking global hierarchical relationship. ▪ Students will also learn about Challenges India faces in using its interest as a post colonial state. ▪ Students will learn India's ability and strategies to engage with its neighbours.

			<ul style="list-style-type: none"> ▪ Students will also learn India's response to the global issues like Cross Border Terrorism, Environmental Challenges and other concerns. ▪ Students will be equipped with the skill to analyse the strategies, response and management of relations in the time of globalisation.
IV	PS: 117	Contemporary Political Theory (Major Issues) (Compulsory)	<ul style="list-style-type: none"> ▪ To develop comprehensive understanding of the subject by teaching both conventional and new areas of relevance in the domain of political theory and philosophy. ▪ To develop theoretically rich and empirically grounded knowledge. To inculcate the values of two important approaches in politics i.e. Values and Facts or Normative and Empirical, which forms the basis of all political argument and debate. Contemporary politics highlights the significance and relevance of how the two concepts work together instead of a dichotomy as emphasised by ancient philosophers. ▪ To highlight the concept of ideology and how it has changed the world political history, how ideology works in developed advanced countries and developing countries. ▪ To understand the disparity of unequal distribution of knowledge and how it is influenced by the space and location of the knower as contributed by Karl Mannheim. ▪ To enable a student as to understand what is justice in contemporary times and how inequality is justice as propounded by John Rawls.
	PS: 118	Political Sociology (Compulsory)	<ul style="list-style-type: none"> ▪ To understand the dynamics between Sociology and Political Science and gain knowledge about theoretical perspectives on the relationship between polity and society. ▪ It provides insights on various approaches to study Political Sociology. ▪ It also acquaints the students with a series of fundamental questions about the social bases of politics and the relationship between states and societies
	PS: 119	Working of Parliamentary	<ul style="list-style-type: none"> ▪ In this paper the students understand the

		and Federal Systems in India	<p>political system of India.</p> <ul style="list-style-type: none"> ▪ They understand the making of the constitution of India and the basic ideal and objectives of the constitution of India. ▪ They also learn the main institutions of Indian Political System. ▪ The contemporary India's political issues are discussed and make students' aware. ▪ They are taken for study tour as a part of their course for practical information.
	PS: 120	Foreign Policy of Major Powers	<ul style="list-style-type: none"> ▪ The study of India's ability to engage with powerful nations of the world like US, Russia, Japan and China will help students understand India's perspective on International relations. ▪ The course will enhance students understanding of India's strategies of engagement in global politics. ▪ Students will also learn about India's negotiation strategy in dealing with global trade, environment and security regime. ▪ Students will learn about the nuances of foreign policy as a tool to resolve the problem of international relations. ▪ Students will be equipped with the skill of analysing the hierarchical relations of Strong States and weak States in the contemporary world.

Department of Sociology

Programme Outcomes

The PG program consists of four semesters in which four papers are taught each semester. After the PG course, a student is exposed to 16 different papers/areas of knowledge. The thrust area of the department is change and development; hence orientation in sociological theories and research methodology are vital aspects to progress in the thrust area. The department is well-equipped to handle these. While dissertation writing in the 3rd semester is an important exercise, it trains budding scholars to undertake research work. Studies on Entrepreneurship Development, Environment and Society, Gender, Rural Sociology, Political Sociology, Social Movements, etc., sensitize the students. After completing an MA, students become professionally competent in the subject and emerge as better human beings in their future lives.

Course Outcomes

Semesters	Course No.	Course title	Course Outcome
1 st Semester	SOC-01	Classical Sociological Traditions	<ul style="list-style-type: none"> Familiarize the students about the socio-economic and intellectual background of the emergence of Sociology. Familiarize the students about the classical sociological perspectives. Enable them to analyze the socio-economic environment using theoretical perspectives.
	SOC-02	Methodology of Social Research -I	Research methodology provides students with the necessary knowledge to undertake better research and conceivably become successful career researchers. The skill of conducting research is an extremely useful life skill that can help students gather and analyse information, build knowledge, think critically and exercise their mind. It is a skill that benefits students beyond their academic life and enables students to understand the world around them better.
	SOC-03	Perspectives on Indian Society	<ul style="list-style-type: none"> Students will learn the basic features and different perspectives of Indian society. Students will gain knowledge of the development of the sociology discipline in India. Students will understand the contemporary social issues in Indian society.
	SOC-04	Globalization and Society	<ul style="list-style-type: none"> The objective of this course is to help understand how the forces of globalization shape the lives of people in different parts of the world. This course will equip the students to understand that global phenomenon such as politics, communications, and economics impact their lives and locality.
2 nd Semester	SOC-05	Modern Sociology Perspective	<ul style="list-style-type: none"> Familiarize the students about modern and post-modern sociological perspectives. Enable the students to understand the relevance of the theories in analyzing modern and post-modern society.
	SOC-06	Methodology of Social Research - II	<ul style="list-style-type: none"> Research methodology provides students with the necessary knowledge to undertake better research and conceivably become successful career researchers. The skill of conducting research is an extremely useful life skill that can help students gather and analyse information,

			build knowledge, think critically and exercise their mind. It is a skill that benefits students beyond their academic life and enables students to understand the world around them better.
	SOC-07	Sociology of Tribal Society with reference to North East India	<ul style="list-style-type: none"> • This paper will help students to understand the plurality, diversity, and multidimensional political entity called northeast India. • This course enables students to comprehend various tribal groups and the problems and challenges they are encountering in the 21st century.
	SOC-08	Sociology of Change and Development	<ul style="list-style-type: none"> • This course is will provide an exposure to key theoretical perspectives for understanding urban phenomena in historical and contemporary contexts. • It also reflects on vital concerns of urban living while narrating the subjective experiences of urban social groups. With case studies from India and other parts of the world this course will help students understand and relate to the complexities of urban living. • To appreciate the significance of the city and the process of urbanisation and its consequences across the globe, through cross disciplinary texts and ethnographic studies.
3 rd Semester	SOC-09	Political Sociology	The major objectives of this course is to acquaint the students with the nature and functioning of the political processes, generate awareness of their status and role as a citizen and to make them aware of the prerequisites of sound democratic political system and its vulnerability. In that PG students attending for Political Sociology course, on its completions, are well aware and acquainted with the subject matter. The students become more clear on the relationship between the two phenomena; society and politics, and how the former influence the later and the vise versa. On completion of the course the students become well aware of their social and political duties and responsibilities as a citizen.
	SOC-10	Sociology of Gender	The course is designed to make students critically understand how the various processes of society influences one's understanding an perception of differences between masculinity and femininity. At the conclusion of the course the students will be able to analyze how social structure and culture shape gendered identities and

3 rd Semester			experiences. Students taking the course would develop the ability to apply sociological theories, terms and concepts concerning gendered experiences and phenomenon to readings and research.
	SOC-11	Dissertation Writing	<ul style="list-style-type: none"> • Writing dissertation enables the students to gain research experience and to explore the world of academic writings. It also helps the students who aim to undertake Ph.D. program in their future endeavours.
	SOC-12	Study of Indian Diaspora	<ul style="list-style-type: none"> • This paper intends to expose the students to the importance of learning about the Indian communities who are spread across the length and breadth of the globe. • Also enable them to understand the different trajectories, stories, legacies of how Indians have created homes and communities elsewhere.
	SOC-13	Urban Society in India	<ul style="list-style-type: none"> • This course is will provide an exposure to key theoretical perspectives for understanding urban phenomena in historical and contemporary contexts. • It also reflects on vital concerns of urban living while narrating the subjective experiences of urban social groups. With case studies from India and other parts of the world this course will help students understand and relate to the complexities of urban living. • To appreciate the significance of the city and the process of urbanisation and its consequences across the globe, through cross disciplinary texts and ethnographic studies.
	SOC-14	Sociology of Religion	Religion is an ubiquitous phenomenon and its multidimensional relation to society, culture and polity can be understood through the study of sociology of religion.
4 th Semester	SOC-15	Social Movements in India	<ul style="list-style-type: none"> • Students will understand the dynamics of social movements and their role in social transformation. • This course will enable the students to look at various social movements from a sociological and comparative perspective
	SOC-16	Environment and Society	The course emphasizes the processes by which environmental problems are socially constructed and defined as social issues. At the conclusion of the course students will be able to understand the social factors that influence environmental resource management and environmental issues by applying the conceptual and theoretical boundaries of both environmental and mainstream

			sociology. Students of this course are in a position to advocate for environment sustainability, and can pursue social research for sustainable environmental policy and management.
4th Semester	SOC-17	Rural Society in India	The course provides sociological understanding of rural social structure, change and development in India. It also aims to impart sociological skills to reconstruct rural institution and rural development programs, to plan, monitor and evaluate rural development programs. Hence PG students attending course on Rural Society in India are well equipped with the subject matter, the problems of the rural people and also build up plausible measures to tackle rural social problems scientifically.
	SOC-18	Sociology of Entrepreneurship Development	<ul style="list-style-type: none"> • The paper offers ways of enabling the students to explore opportunities to become economically independent through unconventional ways. They are taught to be job makers rather than job seekers. • Probes them to think beyond government jobs and explore their passion, talents and hobbies and turn them into meaningful projects. The paper throws insights into various avenues, industries where they can best fit their interest and passions and see results bearing fruits.
	SOC -19	Sociology of South East Asia	This course is proposed to introduce the students to increase their understanding on South East Asia, a region which is a centre of civilization and culture. After going through this course the students will comprehend the strategic importance of this region pertaining to political, social, economic and international affairs.
	SOC-20	Sociology of North East India	<ul style="list-style-type: none"> • Through this course students will comprehend the profile of North east India. • The students will get in depth understanding on the complexity, diversity and challenges northeast India is facing today from the course.

Department of Economics

INTRODUCTION

The Department offers two year MA programme which provides thorough knowledge of theoretical and applied economics.

PROGRAMME OUTCOMES

1. Upon the completion of the course, students will be able to make decision at micro and macro level in the context of economic theory.
2. It will enhance the student's ability to analyze contemporary issues in global and Indian economy.
3. It will enhance the student's skill to use different software and analytical tools research and data analysis.
4. It will help the students to contextualize social issues and explore solutions to the problems in the light of social and business ethics.
5. Dissertation will help the students in professional writing and presentation skills.

PROGRAMME SPECIFIC OUTCOMES

1. Eco-101: Students will be able to handle financial trends and evaluate project before investing.
2. Eco-201,3003,4003. Capacity to use appropriate statistical tools for research and development.
3. Eco-402. Focus on research data analysis through field study and hand on experience on statistical software packages, like, MS-EXCEL, SPSS, STATA, etc..

Course Outcome

Semester wise	Course No	Course title	Course Outcome
1 st Semester	ECO - 101	Quantitative Methods – I	<ul style="list-style-type: none">• Analyses of interest rate, loan repayment and project evaluation. Evaluation of profit maximization and cost minimization.• Analyses of feasible region and strategies for development.
	ECO - 102	Micro Economics – I	<ul style="list-style-type: none">• Identify the interplay of economic concepts with rationality.• Analyze production decisions in context of dynamic consumer choices.• Integrate firm's behavior with market strategies
	ECO - 103	Macro Economics – I	<ul style="list-style-type: none">• Describe the fundamental premises of macroeconomic theory.• Classify the macroeconomics variables in context of various sector of economy.• Appraise the concept of national income using different methods.• Evaluate the interplay of various sector of

			<p>economy and government interventions.</p> <ul style="list-style-type: none"> Integrate the role of banking and government in stabilizing economic system
	ECO 104	- Public Economics	<ul style="list-style-type: none"> Understanding the theories of public economics and the analytical methods used to apply for public policy research.
2nd Semester	ECO 201	- Quantitative Methods – II	<ul style="list-style-type: none"> Experiment to carry out simple data investigations for categorical variables. Measure a random variable that describe randomness or an uncertainty in certain realistic situation. Employ the different types of data and choose an appropriate way to display them.
	ECO 202	- Micro Economics – II	<ul style="list-style-type: none"> Understanding the firm's behavior in different market structure and its role in determining those structures. Comprehending the consumer's inter-temporal choices and risk involved in it. Analyzing the different government policies aimed at improving welfare and avoiding market failure.
	ECO 203	- Macro Economics – II	<ul style="list-style-type: none"> Understand the contemporary macroeconomic policies and issues. Analyze and appreciate current macroeconomic changes in the light of modern macroeconomic theories.
	ECO 204	- International Trade and Finance	<ul style="list-style-type: none"> Analyze the basic concepts and theories of international trade. Examine the different economic models based on specialization and export-orientation in the real world. Assess the role of international trade, gains from trade, trade patterns, exchange rates. Analyze the trade and commercial policies including protectionism and liberalism. Evaluate the role of international financial systems and foreign exchange markets.
3rd Semester \ 	ECO 301	- Economics of Growth and Development	<ul style="list-style-type: none"> Evaluate the fundamental economic concepts and theories of developmental economics. Analyze the developmental approaches, policies, and the issues related to the developmental problems that the world community faces in day to day life. Examine the current pattern of development models and relate to the real macroeconomic problems. Analyze the role of markets and private property through applying basic concepts and tools development. Assess of modern economic growth and development, and environmental problems and issues.

			<ul style="list-style-type: none"> Apply the different development models which relate to structural transformation includes agricultural transformation, rural-urban interaction/migration
	ECO 302 -	Indian Economic Policy	<ul style="list-style-type: none"> Examine a comprehensive understanding of the current issues influencing economic development of India. Application of economic theory in the context of India. Interpret the role and impact of foreign trade and investment in Indian economy.
	ECO 300- -	Optional –I	
	ECO 300- -	Optional –II	
4th Semester	ECO 401 -	Economics of Environment and Natural Resource Management	<ul style="list-style-type: none"> Analyse how and why environmental problems can be modelled as cases of market failure/externalities. Critically discuss the characteristics and properties of measures of benefits and benefit estimation procedures and their applicability to specific situations. Define the basic conditions of the optimal use of renewable and exhaustible resources. Analyse environmental policies as applied to water and air pollution, energy and climate change related issues.
	ECO 402 -	Research Methodology And Dissertation	<ul style="list-style-type: none"> Develop research aptitude and get in-depth understanding of various methods of research. Identify the appropriate research problem and conduct research in an effective way. Apply ethics of research in writing research paper and dissertation thesis.
	ECO 400- -	Optional –I	
	ECO 400- -	Optional –II	

OPTIONAL PAPERS FOR III SEMESTER

Semester wise	Course No.	Course title	Course Outcome
3rd semester	ECO-3001	Industrial Economics-I	<ul style="list-style-type: none"> Describes the industrial efficiency, market structure and concentration. Analyse the cost efficiency and optimum size of industry. It evaluates the projects, its location and prices.
	ECO-	Financial	<ul style="list-style-type: none"> Describe the role of financial institutions and its

	3002	Institutions And Markets-I	<p>importance in the economy.</p> <ul style="list-style-type: none"> • Develop the skills to build investment strategy on different financial markets. • Analyze role of money in the economy and the impact of financial market on the macro economy. • Demonstrate analytical and problem-solving skills within money, banking, and financial market disciplines
	ECO-3003	Econometrics-I	<ul style="list-style-type: none"> • Understand the core concepts and techniques in econometrics, with a special focus on the classical linear regression model. • In-depth understanding of simple as well as multiple linear regression models. • Understand the assumptions upon which different econometric methods are based and their implications. • Introduction to dummy variables and their use in econometric modelling.
	ECO-3004	Agricultural Economics-I	<ul style="list-style-type: none"> • Highlight interdependence between agriculture and industry and the rest of the economy with empirical evidences and theoretical models. • Identify the extent of diversification of rural activities and related issues and problems in the country. • Acquire skill of estimation of farm budgeting, revenue, resource use efficiency in agriculture. • Understanding of Land Reforms and Land Policy in India.
	ECO-3005	Demography-I	<ul style="list-style-type: none"> • Clarity on the various measures of demographic variations and understanding of the theories of Population and development. • Demographic trends and effects of sex and age structure, economic and social implications
	ECO-3006	Economics Of Gender And Development-I	<ul style="list-style-type: none"> • Justify the position of women's studies and its development, and identify social construction of gender in the context of gender role and its development. • Classify the theoretical standpoint available and reinforced in the study of socioeconomic analysis of gender with special reference to value and distribution • Articulate status of women in decision making, resources ownership, work participation and contribution to national income. • Better understanding of Women, Technology and

			Environment linkages.
	ECO-3007	Computer Application In Economic Analysis	<ul style="list-style-type: none"> • Have a basic understanding of personal computers and their operations. • Understand various software and hardware, various security issues. • Familiarize students with complete fundamentals and the packages commonly used in computing software.
	ECO-3008	Economics And Law	<ul style="list-style-type: none"> • Describes economic analysis of law relating to consumer activities and business organization – both national and international aspects. • Familiarize students with different types of economic offence and punishment.
	ECO-3009	History Of Modern Economic Thoughts	<ul style="list-style-type: none"> • Describes the evolution of value, general equilibrium and welfare economics. • Familiarize students with changing theories and its applicability in the real world.

OPTIONAL PAPERS FOR IV SEMESTER

Semester wise	Course No.	Course title	Course Outcome
4 th semester	ECO-4001	Industrial Economics-II	<ul style="list-style-type: none"> • It describes the industrialization in india since independence. • Familiarize students with financial institutions financing industries. • Examine different industrial policies and issues in India.
	ECO-4002	Financial Institutions And Markets-II	<ul style="list-style-type: none"> • It describes the goals, targets and constraints of monetary policy, financial markets, issues and evidence in Indian Banking system. • Students are familiarized with the role of commercial banks, central banks and private banks. • Students are also familiarized with the availability of funds from Non-Bank Financial Institutions.
	ECO-4003	Econometrics-II	<ul style="list-style-type: none"> • Students would be able to formulate econometric model to analyze data and be able to formulate cause-effect relationship. • Use econometric software for data management and statistical analysis. • Students would be able to understand time series and multivariate analysis. • Demonstrate their understanding of applied econometric analysis models/methods with respect to choice of model, estimation method and interpretation of results.

ECO-4004	Agricultural Economics-II	<ul style="list-style-type: none"> • Clarity on structure, sources and problems associated with rural labour market and rural finance. • Evaluate behaviour of agricultural prices based on theoretical models and empirical analyses and pricing of inputs and role of subsidies. • Develop understanding of Agricultural markets and marketing efficiency, structure and imperfections, marketed and marketable surplus • Identify the trends of agricultural growth, international trade and agri-business under WTO, globalization, liberalization of domestic and international trade.
ECO-4005	Demography-II	<ul style="list-style-type: none"> • Understanding the theories of migration and empirical evidences of the effects of migration on population growth and related issues; Urbanisation-growth and distribution of population. • Acquire skills to undertake census and survey, tools for practical purposes and projections. • Articulate on characteristics of population dynamics and determinants, population policies in India
ECO-4006	Economics Of Gender And Development-II	<ul style="list-style-type: none"> • Identify the status of women in the labour market in terms of supply, nature of work, wage differential and determination, productivity, and opportunities. • Certify better insight into the needs for social security and protection for women in labour market and legislation for women. • Articulate on Gender-planning techniques, Governance and Development Policies and women's empowerment in India.
ECO-4007	Welfare Economics	<ul style="list-style-type: none"> • Describes different theories on aggregate welfare and optimum resource allocation. • Familiarize students with consumer surplus, pareto optimality, compensation criteria and the divergence between private and social cost.
ECO-4008	Economics Of Insurance	<ul style="list-style-type: none"> • It describes economic security and different types of insurance. • Students will be familiarized with social vs private insurance, risk management, essential of life and health insurance and insurance and development.

	ECO-4009	Labour Economics	<ul style="list-style-type: none"> • Students will know the nature and characteristic of labour market in developing country. • The existence of poverty and unemployment in the country. • Students are also familiarized with employment policy, wage determination, labour union movement and labour legislation.
	ECO-4010	Mathematical Economics	<ul style="list-style-type: none"> • Solve fundamental problems in both macroeconomics and microeconomics using mathematical tools. • Calculate economic problems through calculus. • Articulate optimization tools to describe feasible choices and to find best solution in the choices available. Estimate the application of mathematical tools growth models.
	ECO-4011	Economics Of Infrastructure	<ul style="list-style-type: none"> • Describes different theories of infrastructure. • Students gets the knowledge of irrigation and energy infrastructure, transport and communication, social infrastructure, the finance and pricing.

Employability/entrepreneurship/skill development Outcome of the Courses

Career opportunities for MA Economics are given below;

- i) Specialized cadre (Economist) in NABARD, RBI, SBI and other banks for MA Economics Students.
- ii) Indian Economic Service (IES).
- iii) Statistical Investigator (NSSO).
- iv) Census Department.
- v) Labour and Employment Department.
- vi) Statistical Officers in State Economics and Statistical Department.
- vii) Industrial Organisations and Associations.
- viii) International Organisation like World Bank, International Labour Organisation, Food and Agriculture Organisation, Asian Development Banks, IMF, etc.
- ix) Government organization like NITI Aayog.
- x) Research and Data Analyst.
- xi) PhD and Academic Career in Economics.

Department of Education

Programme Outcomes

- A student who completes the M.A. Education programme would have a wholesome understanding of the multidimensional process of education and would therefore be able to design curricula and engage in the process of teaching at the undergraduate level.
- The programme of master of arts in education is by its nature multidisciplinary including the foundations of psychology, sociology, economics, philosophy and technology of education. This enables the students to have a wholesome view of human development in general and personality development.
- The programme provides for equipping the participants of engaging societal and environmental views thereby creating awareness and equipping preparedness to face situations.
- Value education, human rights education, inclusive education, women empowerment, special education, the technology of education, population education, early childhood care and education, educational assessment and evaluation, research methodology of education along with the statistical techniques, etc. are the areas and topics covered under the post graduate programme and through these the students will develop a lot of knowledge and skills related with the multi-dimensional domain of the life
- Dissertation writing which is offered in lieu of two choices of papers spread into the third and fourth semesters provides an opportunity for students to develop skills in research. As the fieldwork compulsory part of the dissertation work the students which means they gain experiences that will help the students for shaping and developing aspirations to research in higher education.
- The first-hand experience with respondents derives their empirical knowledge on data collection which is an essential attribute of research. Thus, the course focuses on the theoretical and research aspects along with the practical skills required to become an academician and researcher in the field of education.

Programme Specific Outcomes

- Recognize and apply the knowledge about various theories of education and their practical applications.
- Explore the idea of the enrichment of Social Emotional Learning (SEL) in terms of healthy attitudes and habits, soft skills, and overall integrated personality for good global citizenship.
- Develop skills in data collection, analyses and report writing the dissertation.
- Preparation of students in the development of advanced investigative skills for research works in sunrise areas complexities of human life.
- Development of ICT-related skills in teaching, learning and educational research.
- Creating knowledge and awareness on psychology, Philosophy, sociology, environment and population concerns, values and human rights, gender issues, engaging in the community etc.

Course Outcomes

Semester	Course No	Course Name	Course outcome
I	MAEDU-101	Philosophical Foundations of Education	<p>Students will be able to</p> <ul style="list-style-type: none"> ➤ Analyse the various contribution of Philosophy to the field of education. ➤ Compare and evaluate the contribution of various Indian Schools of Philosophy to the field of education. ➤ Critically analyse and evaluate the impact of Western Philosophies on Indian Education. ➤ Summarize the contribution of a few of the Great Indian Thinkers. ➤ Recognize the concepts related to social philosophy of education. ➤ Explore the nature and sources of knowledge getting process.
	MAEDU-102	Psychological Foundations of Education	<p>Students will be able to:</p> <ul style="list-style-type: none"> ➤ Explain the contribution of different schools of psychology to education. ➤ Analyse and apply various learning theories in the teaching-learning process and also describe the role of motivational theories. ➤ Describe the relationship between motivation and learning. ➤ Have the ability to measure personality using test tools. ➤ Recognize the relationship between mental health and adjustment ➤ Recognize the importance of emotional and spiritual intelligence.
	MAEDU-103	Teacher Education	<p>Students will be able to:</p> <ul style="list-style-type: none"> ➤ Aware of the historical development of Teacher Education in India. ➤ Differentiate pre-service and in-service teacher Education ➤ Aware of student teaching, internship, core teaching skills and will have exposure to evaluation of student teaching programme. ➤ Perceive various problems of teacher education namely professional ethics, 21stcentaury skills, problems, issues and challenges in teacher education. ➤ Explore various modalities are used for teachers, teacher educators and educational administrators for different levels of education.
	MAEDU-104	Distance Education	<ul style="list-style-type: none"> ➤ Students will be able to define and identify the characteristic features of Distance Education and trace the growth of Distance Education in India and around the world ➤ Students will be able to demonstrate the different types of Information and Communication and the specific ways in which they can be used in Distance Education

			<ul style="list-style-type: none"> ➤ Students will be able to illustrate the process of designing and preparing Self-Instructional Materials ➤ Students will be able to analyze different programmes offered in Distance Education ➤ Students will be able to apply basic evaluation methods to assess programmes of Distance Education
II	MAEDU-205	Sociological Foundations of Education	<p>Students will be able to:</p> <ul style="list-style-type: none"> ➤ Discuss aspects of the social foundation of a society that impacts education. ➤ Analyze factors of social changes and assess social issues confronting society. Students will be able to draw out educational implications. ➤ Illustrate the rich cultural components – social structure and fabric of the society and identify the strengths of the community for the furtherance of the education system. ➤ Establish a good grasp of emerging social issues and how to deal with them. ➤ Understand the cultural context and act as a resource person on social issues and themes in the community eg. implementation of communitization of elementary education/ role of School Management Committee in the development of school education.
	MAEDU-206	Methodology of Educational Research and Statistics	<p>Students will be able to:</p> <ul style="list-style-type: none"> ➤ Recognize the sources from where knowledge could be obtained ➤ Critically examine the nature, scope and limitations of educational research. ➤ Develop skills in the modalities necessary for the formulation research problem. ➤ Apply the knowledge about the sources for obtaining the data, analyzing and drawing for solving an educational problem. ➤ Analyses the major approaches for conducting the educational research and preparing and communication of result – the research report.
	MAEDU-207	Comparative Education	<p>Students will be able to:</p> <ul style="list-style-type: none"> ➤ Explore the need of comparative education as an emerging discipline (with its scope and major concepts) of education. ➤ Distinguish the educational systems in terms of factors and approaches of comparative education. ➤ The skills to assess the efficacy of educational systems of various countries in terms of the prevailing trends in those countries. ➤ To use the results of assessments made by various

			<p>countries and to know the role of UNO and its various bodies for the promotion of Indian education.</p> <ul style="list-style-type: none"> ➤ About the implications of education for solving the prevailing problems of education in India.
	MAEDU-208	Value Education and Human Rights (CBCS)	<p>Students will be able to :</p> <ul style="list-style-type: none"> ➤ Realise the need and importance of Value-Education and education for Human Rights. ➤ Recognize the the nature of values, moral values, moral education and to differentiate such values from religious education, moral training or moral indoctrination. ➤ Differentiate the basis of morality and with the place of reason and emotions in the moral development of the child. ➤ Critically examine the process of moral development vis-à-vis their cognitive and social development. ➤ Develop skills on various intervention strategies for moral education and conversion of moral learning into moral education.
III	MAEDU-309	Intelligence, Creativity and Education	<p>Students will be able to:</p> <ul style="list-style-type: none"> ➤ Explain the knowledge and structure of intelligence and creativity based on a variety of theories. ➤ Explain the stages of development and the process of the variables. Subsequently, they become sufficiently aware of how creative potential can be fostered especially in the school context. ➤ Demonstrate how intelligence and creativity can be measured and assessed. ➤ Recognize the approaches to the education of creative and intellectually gifted children. ➤ Apply measures and techniques to foster creative potential
	MAEDU-310	Environmental Education	<p>Students will be able to:</p> <ul style="list-style-type: none"> ➤ Define the meaning, nature and importance of environmental education, awareness and attitude change. ➤ Develop sensitivity towards environmental issues. ➤ Describe the relationship between man and environment and understand the need for a sustainable development. ➤ Demonstrate competencies to develop programmes of environmental education. ➤ Evaluate the environmental hazards and their procreative measures. ➤ Aware about the various environmental projects globally.
	MAEDU-311	Educational Testing and Evaluation	<p>Students will be able to:</p> <ul style="list-style-type: none"> ➤ Recall & recognize the concept of Educational Evaluation ➤ Apply the knowledge of various test construction for educational research ➤ Develop the skills of development and standardization of research tool ➤ Explore the measurement of intelligence, aptitude, personality, Attitude Scales and interest.

			<ul style="list-style-type: none"> ➤ Discuss and critically evaluate the new trends in evaluation
	MAEDU-312 A	Population Education (Elective)	<p>Students will be able to</p> <ul style="list-style-type: none"> ➤ Describe the nature, scope, and need of population education. ➤ Analyse the factors affecting population growth and understand the need for balancing the composition through distribution. ➤ Explore the various techniques of maintenance of “status” of population. ➤ To appreciate the value of a prosperous family. ➤ To examine latest policies of population education and agencies working towards their achievement.
	MAEDU-312 B	Education for Leisure (Elective)	<p>Students will understand/develop:</p> <ul style="list-style-type: none"> ➤ Leisure is a resultant of science and technology if needs to be used in a meaningful way. ➤ To organize leisure time activities at all levels of education in school. ➤ leisure time activities as a seemed vocation. ➤ To encourage community agencies to utilize this aspect to make to a learning society.
	MAEDU-312 C	Dissertation (Elective)	<p>Students will understand/develop:</p> <ul style="list-style-type: none"> ➤ The art of writing dissertation work and report of the research work
IV	MAEDU-413	Special Education	<p>Students will be able to:</p> <ul style="list-style-type: none"> ➤ Discuss the meaning and scope of special education and the evolution of it in India. ➤ Evaluate the various suggestions given by different commissions and programmes on education of children with special needs for realizing the concept of “Universalization of education. ➤ Analyse the specific characteristics and identify various types of exceptional learners. ➤ Apply various educational intervention programmes for meeting the needs of exceptional learners.
	MAEDU-414	Educational Technology	<ul style="list-style-type: none"> ➤ Students will be able to discuss the meaning, nature, scope and significance of Educational Technology ➤ Students will be able to demonstrate an understanding of the Communication process and its importance in Classroom communication ➤ Students will be able to formulate instructional objectives ➤ Students will be able to discuss various instructional strategies ➤ Students will be able to identify and describe different models of teaching ➤ Students will be able to demonstrate the use of Flanders

		<p>Interaction Analysis in the classroom</p> <ul style="list-style-type: none"> ➤ Students will be able to discuss the role of computers and internet in teaching and research
MAEDU-415	Education for the Empowerment of Women	<p>Students will understand/develop:</p> <ul style="list-style-type: none"> ➤ The expected roles (political, social and economic) of women in developing countries including India ➤ The types and modes of preparation needed in playing such roles effectively and efficiently in tune with the constitutional directives ➤ An awareness of the concept of women as change agents for the transformation of Third World and developing countries
MAEDU-416 A	Early Childhood Care and Education (Elective)	<p>Students will be able to:</p> <ul style="list-style-type: none"> ➤ Recognise the meaning and importance of early childhood care and education ➤ Explore the various aspects of development during early childhood years ➤ Analyse the contributions of Philosophers and Thinkers on early childhood care and education ➤ Develop skills on Curriculum development and Method of Teaching at early childhood level ➤ Realize awareness on various agencies for the promotion of early childhood care and education
MAEDU-416 B	Economics of Education (Elective)	<p>Students will be able to:</p> <ul style="list-style-type: none"> ➤ Explore the meaning, importance and scope of the economics of education. ➤ Apply the knowledge of education expenditure as productive consumption and returning investment through the function of human capital and planned manpower development. ➤ Distinguish the concept and relationship between input and output of education. ➤ List out the source and resources of finances for education. ➤ Develop skills on the financial resource management.
MAEDU-416C	Dissertation (Elective)	<p>Students will understand/develop:</p> <ul style="list-style-type: none"> ➤ The art of writing dissertation work and report of the research work

Department of History and Archeology

M.A. Syllabus in History & Archaeology

PROGRAMME AND COURSE OUTCOME

The Department primarily undertake research on the history of ethnic communities, spanning the pre-colonial period to contemporary era. To meet one of this aim, Archaeology is introduced in the History curriculum to aid Post-Graduate students and PhD students in the study of the region's historic and prehistoric past. The Two-Year Master of Arts program in History & Archaeology offers a curriculum incorporating both the discipline of History and Archaeology. The main objective of the curriculum is directed towards imparting knowledge to students on the ideas of history and its epistemology, world history, Indian and regional histories with emphasis on various historical sources, archaeology being one of such sources vital for reconstructing the past of preliterate oral societies. In doing so, the curriculum attempts to promote and provide critical insights to the history of humanity and cultural heritage.

1. From an overview standpoint of the courses offered, papers are directed towards basic fundamental methodologies that historians and archaeologists employ in the study of the past, thus helping students to acquire and demonstrate skills in the critical analysis of primary and secondary historical sources.
2. The courses also seek to appraise students on historiographical theories and debates in the field of historical research. Such a course is vital to train students of history in both theoretical and conceptual developments in historiography.
3. The course thus intends to introduce students to the intricacies of history as a discipline and evolution of myriad of tradition of historical writings.
4. In general, the objective of all the Courses will help impart knowledge of the history, both 'western' and 'non-western', their change over time, of different regions of the world, including the Indian Subcontinent and Northeast India, in particular.
5. A portion of the course is also aimed at introducing students of history to the discipline of Archaeology – the nature of archaeological data, its methods and the multidisciplinary approaches to the study of past societies and their historical developments. With the basic fundamental background of Archaeology in the Under-Graduate level, its course at the Master Program is essentially designed to introduce students of history to the fundamentals of prehistory, prehistoric tool technology and the role of palaeoenvironment within which prehistoric cultures evolved.
6. The Archaeology section of the course also explores some of the major themes of our human past, beginning from evolution of early hominids to the origins of agriculture and animal domestication. In addition, the museology course is also designed to introduce students of Ancient Indian History to the history, role and significance of museum-collections and display of material culture/artefacts in the dissemination of knowledge of cultural values among different groups of people and as centres of research for the study and reconstruction, particularly of extant (or in the process of becoming so) cultures and ways of life. Emphasis are given to ethnographic museums which are especially relevant to the region of Northeast India. Such collections have a universal appeal in their capacity to illustrate the human endeavor to adapt to different environmental conditions and also facilitate the comparative study of human's reaction to common problems in various natural settings.
7. Keeping in focus the interdisciplinary objective of the curriculum, both papers of History and Archaeology are incorporated in the Two-Year Master of Arts Degree program in the Department of History & Archaeology, NU. All Four Papers each are essential Core Papers in the First and Second Semester, while in the Third and Fourth Semester, students are given the choice to opt from Elective Courses. Choice-Based Credit Papers are also incorporated in the Third and Fourth Semesters for students of various Departments within the School of Social Sciences.

PROGRAMME SPECIFIC OUTCOMES

H-101: The course explains and discusses both theoretical and conceptual developments in historiography. The course will help students to understand the evolution of the tradition of historical writing, the latest trend in historiography and the intricacies of history as a discipline.

H-102: The course is aimed at introducing students to the fundamentals of archaeology, history of archaeological thoughts, the various theoretical approaches in archaeological interpretation, archaeological field methods and the multidisciplinary approaches to the reconstruction and study of past societies and their historical development. For a hands-on practical experience, the paper is based on fieldwork of a preliminary nature, involving archaeological explorations/excavations to any archaeological sites in Northeast India.

H-103: The course is essentially designed to introduce students of history to the fundamentals of prehistory, prehistoric tool technology and the role of palaeo-environment within which prehistoric cultures evolved. The course will also explore some of the major themes of our human past, beginning from evolution of early hominids to the origins of agriculture and animal domestication.

H-104: The course gives a broad idea about the nature of the Medieval World. It acquaints students on the rise and development of a vast social, economic and political structure which lasted for about a thousand years in Western Europe. It will acquaint the students with the Feudal development in India and various ideas and debates surrounding the medieval period.

H-105: The objective of the course is to acquaint students with two significant developments –Capitalism and Imperialism covering the 16th to the mid-20th century, the key problems in the emergence and development of Western Capitalism, its relation with colonial-imperialist expansion and the underlying forces behind the last century imperial rivalries.

H-106: The course will enable students to understand the history of the Nagas in a comprehensive way. Taking into account the socio-cultural and political dimensions of the society under investigation from pre-historic to the modern trend, the course will further help understand the survival, continuity and changes in Naga society.

H-107: The course is intended to introduce the students to the basic trends in socio-economic changes and development in India under the British rule, which influences the policies and programs of the Indian states after the transfer of power.

H-108: The course gives a broad view on the operation of nationalism in Europe. It will give a clear insight into the development of the ideas of nationalism for students specializing in Modern Indian History.

H-201: To familiarize students with the main trends of socio-religious development in India from the Vedic times to about the close of the eighth century. The course intends to investigate the development of social processes and religious practices in ancient India. It also traces the penetration of Puranic religion and the social development in North-East India. The course will enable students to discern the socio-religious processes and trends in ancient India.

H-202: To introduce the evolution of political ideas and institutions and the economic development in ancient India. The emphasis is on the theories of their origin and development to equip the students analyse the evidence of the sources. The course also requires the students to familiarize themselves with the topography,

climatic conditions and technological/ cultural developments. This course will enable students to understand the origin and evolution of political institutions and economic developments in ancient India.

H-203: This course is to study in depth two specific cultures of Prehistoric India. While students are acquainted with the cultural features of the Neolithic and Chalcolithic phases, they are also expected to understand how the material evidence is recovered, analyzed and interpreted from the archaeological excavations by studying the excavation reports. Students offering this course are also encouraged to visit various museums in the country for a first-hand knowledge of the material evidence.

H-206: The course covers two fairly well-defined cultural horizons of Northeast India-the Neolithic and Megalithic. An examination of these cultures will be made on the basis of exploration and excavation reports as well as available published material. The focus of study is on the ecological background, the typological processes, as well as the problem of chronology and extra-regional linkages in the context of their origin and development.

H-403: The objective of the course is to familiarize the students on nation building processes, the problems confronted by the new nations, the strength and weaknesses of Indian democracy, India's achievements and contributions to international community.

H-405: This course aims at a critical study of the political developments in North East India with special reference to the hill areas since transfer of power in 1947.

H-407: The objective of this course is to study the beginning and development of European colonialism in South-East Asia. It will also study the main features of Colonial policy and the society and economy of South-East Asia and their reaction to Western Colonialism.

H-408: The course will give a clear understanding of the historiography of the colonization of America and the scramble for power leading to wars and revolutions. It will give a clear insight into the political, economic and military forces that shaped the history of USA.

H-503: The course is aimed to provide students with the knowledge base and practical tools to critically evaluate historical and archaeological research, formulate research questions and undertake research. Students at the end of the Course will acquire and develop research aptitudes to undertake further advanced research after the Post-graduate program.

COURSE OUTCOME

Semester	Course No.	Course title	Course outcome
Semester-1	H-101 H-102 H-106 H-107	H-101: <i>Historical Methods</i>	Helps to understand the evolution and development of the tradition of historical writing. Explore some fundamental components of historical thinking methodologies and various concepts, techniques, debate and its application in research works and historical investigation.
		H-102: <i>Archaeology: Methods and Approaches</i>	The course is aimed at introducing students to the fundamentals of archaeology, history of archaeological thoughts, the various theoretical approaches in archaeological interpretation, archaeological field methods and the multidisciplinary approaches to the reconstruction and study of past societies and their historical development. For a hands-on practical experience, the paper is based on fieldwork of a preliminary nature, involving archaeological explorations and excavations to any archaeological sites in Northeast India.
		H-106: <i>Social and Political History of the Nagas</i>	Upon the completion of the course, students will be acquainted with the social, economic and political history of the Nagas and will be able to critique the colonial and missionary interventions in the affairs of the Naga Hills. It will also help in the understanding of some of the most recent trends in the study of Naga communities, the larger ideologies of both the colonial and missionary agencies.
		H-107: <i>Modern Indian Society</i>	Upon the completion of the course, students will be able to understand the basic social and political history of India of modern times. The course will enable the students to understand the basic trends in socio-economic changes and developments in India under the British rule. Also it will give insight into the influences of the British rule in the policies and programs of the

			Indian states after the transfer of power.
Semester-2	H-103 H-104 H-105 H-108	H-103: <i>Introduction to Pre-Historic Archaeology</i>	The course is essentially designed to introduce students of history to the fundamentals of prehistory, prehistoric tool technology and the role of palaeo-environment within which prehistoric cultures evolved. The course will also explore some of the major themes of our human past, beginning from evolution of early hominids to the origins of agriculture and animal domestication.
		H-104: <i>Feudalism</i>	The course will give the basic understanding about the characterization of medieval and will furnish a conceptual framework for the understanding of social structure and relation in Medieval Europe. It will also provide an in-depth knowledge about the feudal development in the India, and the problem of periodization around this concept in the context of the 20th century debates of feudal constructs.
		H-105: <i>Capitalism and Imperialism</i>	The course will provide an in-depth understanding of the major developments in Europe from the period of the rise of Nation States and National Monarchies. It will also acquaint the students with the progress of modern society and economic crisis. The course culminates in new age Colonialism, transformation of human civilization by the industrial revolution and the events of the two World Wars with its tremendous impact on the general political fabric of international politics in the modern world.
		H-108: <i>Nationalism</i>	This course will equip the students with the historiographical background of the operation of nationalism in Europe in the 19 th centuries. It will further familiarize the students about the Second World War and its impact on nationalist movements in Asia, decolonization of European empires

			in Asia, Africa, nation building in Asia and Africa. It will enlighten about the problems of national integration, socio-economic development, ethnicity and continued nationalist upsurges within the newly formed states.
Semester-3	H- 201 H- 206 H-403 H-407	H-201: <i>Society and Religion of Ancient India (c1500 BC –AD 800)</i>	Enlightens the students about the main trends of socio-religious development in ancient India from the Vedic times to eight century AD. It enables them to investigate the development of social processes and religious practices in ancient India. Explore the penetration of puranic religion and the social development in North east India.
		H-206: <i>Neolithic and Megalithic Cultures of North East India</i>	The course covers two fairly well-defined cultural horizons of Northeast India-the Neolithic and Megalithic. An examination of these cultures will be made on the basis of exploration and excavation reports as well as available published material. The focus of study is on the ecological background, the typological processes, as well as the problem of chronology and extra-regional linkages in the context of their origin and development.

		<p>H-403: <i>Contemporary India (1947-2000)</i></p>	<p>The course will acquaint the students with the problems which confronted the new nations immediately after independence and the nation building processes. It will also sensitize them about the strength and weaknesses of the Indian democracy and motivate them to critically appreciate India's achievements in education, science and technology, art and culture as well as India's contributions to international community. Through readings and discussions on India's international relations and the 1990's economic reform the students have been acquainted with the processes through which the image of the 'new India' has been constructed.</p>
		<p>H-407: <i>Colonialism in South East Asia (1511-1850)</i></p>	<p>With the recent National Policy and the importance laid on 'India's Look East Policy', this course is intended to provide the students with relevant information of the colonialization by the Western European powers of this massive sub-region of Asia, lying between India and China. This course will acquaint the students with the massive political and socio-economic upheavals and the rise of nationalism leading to independence of the nations of the ASEAN.</p>
Semester-4	<p>H-202 H-203 H-405 H-408</p>	<p>H-202: <i>Polity and Economy of Ancient India (c.1500-AD 600)</i></p>	<p>Help understand the evolution of political ideas and institutions and the economic development in ancient India. Comprehend the various theories of origin and development and equip the students to analyze the evidence of the sources. It also enables the students to familiarize themselves with the topography, climatic conditions and technological/cultural developments of ancient India.</p>
		<p>H-203: <i>Neolithic and Chalcolithic Cultures of India</i></p>	<p>This course is to study in depth two specific cultures of the Prehistoric India. While students are acquainted with the cultural features of the Neolithic and Chalcolithic</p>

			<p>phases, they are also expected to understand how the material evidence is recovered, analyzed and interpreted from the archaeological excavations by studying the excavation reports. Students offering this course are also encouraged to visit various museums in the country for a firsthand knowledge of the material evidence.</p>
		<p>H-405: <i>Government and Politics in North East India since 1947</i></p>	<p>The course will acquaint the students with the traditional political system in North East India, the constitutional developments in tribal areas under the Government of India Act 1919, 1935 and the political development since 1947. The course will also give a clear insight into the immigration problem, insurgency, autonomy movement in the North Eastern region of India.</p>
		<p>H-408: <i>Modern USA</i></p>	<p>The course studies the United States history since its colonization. It will help the students to understand how governments, markets, individual and groups functions as an agent of change. It will help to develop the ability to apply this historical development to understand the present day socio-political and economic structures.</p>
		<p>H-503: <i>DISSERTATION</i></p>	<p>The course is aimed to provide students with the knowledge base and practical tools to critically evaluate historical and archaeological research, formulate research questions and undertake research. Students at the end of the Course will acquire and develop research aptitudes to undertake further advanced research after the Post-graduate program.</p>

Department of Linguistic

Programme Outcomes

The MA in Linguistics is designed to provide students with a knowledge of the traditional core areas of linguistic analysis as well as a deeper specialization in a chosen subfield or interface area.

- The student will understand the complex areas in society in which language plays a role and gain knowledge of how language and communication works. This will aid them to communicate effectively in all contexts.
- The program will provide sufficient knowledge and skill to convert the theoretical knowledge into practice.
- Students will learn various aspects of human languages that includes sounds (Phonetics, Phonology), Words (Morphology), Sentences (Syntax), Meaning (Semantics) and Language Use (Pragmatics). This will increase the learner's knowledge and understanding of the world and ultimately the knowledge attained in Linguistics will aid the learner in many practical applications in society.
- The overall knowledge gained from the program will assist the students to apply the knowledge of language fundamentals in society, computers, psychology, neurology, language teaching, history, and anthropology.
- The student will acquire a sense of social responsibility towards safeguarding the interests of the lesser-studied languages, taking an active part in documenting, describing, and the efforts to revitalize those languages.
- Research-based dissertation has been adopted at the Master's Degree level compulsorily. Thus, this program will enable students to Design and conduct research, analyze and interpret data to provide valid conclusions in both descriptive as well as applied language studies.

Programme Specific Outcomes

At the end of the program, the student will be able to:

- Understand the concepts of Phonetics, Phonology, Morphology, Semantics, Pragmatics and applied linguistics and how to practically use them.
- Students will be equipped to apply linguistics knowledge to any languages irrespective of whether the language is known to the student or not.
- Evaluate and Adopt procedures of Psycholinguistics, Clinical, lexicography, Computational Linguistics and Translation.
- Enhance literacy development in both official language(s) and the foreign language. In this case, the learner will be able to teach English as a second language confidently.
- Follow the procedures as per laboratory standards in the areas of Phonetics, language teaching, computational linguistics, and neurolinguistics.

Department of Mass Communication

Programme Outcomes

The Master's course is designed for students desirous of taking up careers in mass media. A thorough grounding will be provided in communication and journalism theories and mass media research. The syllabus is designed in such a way that the latest developments in the ever-changing media sector can be easily incorporated in classroom teaching.

Programme Specific Outcomes

The objectives of the course are: 1) To hone the journalistic and research skills through practical work, assignments, project reports, seminars, workshops and to acquaint students with advanced journalism and media practices. 2) To fully acquaint students with the need to maintain an even balance between practical, theoretical and conceptual aspects of media professions and lend them a critical understanding of the communication package as a whole. 3) To offer appropriate grounding in the issues, ideas and challenges of 21st century thereby broadening the world view of the future media practitioners. 4) To develop multi-tasking skills required in the dynamic multi-media and convergent environment.

Course Outcomes

Se m	Course	Course Title	Credit	Course Outcomes/Employability Scope
I	MCMA 101	Introduction to Mass Communication and Journalism	5	To help students understand the concept, process and functions of Communication with the help of proven models and theories.
	MCMA 102	Principles and Theories of Mass Communication	5	This course will facilitate to understand the functions of model and theory and its relationship to methodology. Further one can evaluate and apply theoretical perspectives in addressing demands in their personal and professional lives.
	MCMA 103	Reporting and Editing for Print Media	5	To help students understand the concept of news and about the process of writing and editing for the press. Job potentiality in the concerned media industry is enormous
	MCMA 104	Media Laws and Ethics	5	To enable the students understand the legal and ethical aspects of the Indian media and the existing regulatory mechanisms. To remain in the profession and to safeguard their job this course bears significance
	MCMA 105	Editorial Practice	4	High job potentiality in all media organizations.
			24	
II	MCMA 106	Advertising & Public Relations	5	This professional course helps in securing job in the field of advertisement and PR sectors
	MCMA 107	Development Communication	5	This course has tremendous job potentiality in diverse field
	MCMA 108	New Media & Technology	5	Excellent job potentiality is there in new media sectors
	MCMA 109	Communication Research Methods	5	
	MCMA 110	Media Management	5	Job potentiality is there in management sectors in different media departments/wings
			25	
III	MCMA 111	Film Studies	5	Job potentiality is there in various technical branches in film and television institutions
	MCMA 112	Broadcast Journalism	5	
	MCMA 113	Communication Research Project /Dissertation Work	5	
	MCMA 114	Basic Photography	3	Employability scope remains in govt and private sectors
	MCMA 115	Investigative Reporting (Open Choice Elective)	5	Excellent scope remains for prospective journalists
			23	
IV	MCMA	Media Literacy and	5	

	116	Human Rights		
	MCMA 117	Media in North East India	5	
	MCMA 118	New Media Applications	5	
	MCMA 119	Rural Journalism and Rural Communication	5	Scope remains to report rural issues for rural journalists
	MCMA 120	Online Journalism	5	Self employability scope remains along with other prospects
	MCMA 121	Science Communication	5	Self employability scope remains along with other prospects
	MCMA 122	Corporate Communication and Business Communication	5	Job potentiality is tremendous in corporate/PSU sectors
	MCMA 123	Alternative Media	5	
	MCMA 124	Documentary/Visual production	5	Individual may prosper differently once acquired the skill seriously
			25	

**Centre for Naga Tribal Language
Studies**

Programme Outcomes

- A student will learn the fundamental aspects of the study of Folklore and Cultural Studies which will be instrumental in equipping them for further studies with an interdisciplinary and trans-disciplinary approach to the study of Naga Culture and develop regional literature
- Upon completion of the course, students are expected to have a nuanced understanding of the key foundational concepts and principles that shape the knowledge system of folklore studies, looking in particular at indigenous and regional aspects.
- Courses such as translation studies provides a hands-on practical sessions that will equip them in the theoretical and practical aspects of translation, which is an important aspect of developing any regional literature.
- The course also provides extensive training in identifying folklore genres and understanding the importance and function of folklore in affiliated disciplines such as linguistics, anthropology and literature.
- Courses such as Research Methodology equips students with an in-depth understanding of the know-hows of research work, including understanding the importance of field ethics which the students can apply in the broader contexts of research or documentation.

Programme Specific Outcomes

- Students will be able to understand what exactly we understand by folklore and how it is important for carving community identity.
- Students will be able to tackle the sensitive issues of cultural preservation and development of cultural heritage.
- Students will learn how to see folklore as a reflection of the psychology of the community and how the personal, social, historical and political parts of community create folklore.
- Students will gain understanding of literature review, field methods such as qualitative and quantitative research, dissertation writing and publication which will help the student to undertake future research programme or work with NGOs and Government agencies or Tribal Literature boards towards cultural heritage and cultural conservation.

Department of Psychology

Programme Outcomes

The MA Psychology programme aims at the following outcomes:

- Develop a strong theoretical orientation in the field of psychology.
- Develop professional competence in the applied areas of psychology.
- Develop a strong orientation towards psychological research and able to conduct ethical research with sound methodology.
- Able to extend the knowledge base of theoretical and applied psychology to the community at large.

Programme Specific Outcomes

- Able to understand human cognitive processes, human personality, human development, organizational behavior, social perception, group processes and psychopathology.
- Able to carry out Psychological Assessment.
- Training in conducting both quantitative and qualitative research.
- Training in reporting research work ethically.
- Understand counselling processes and apply counselling skills.
- Understand and apply psychotherapy.

Course Outcomes

Course No.	Course name	Course outcome
PSY-PG-101	History and foundations of Psychology	<ul style="list-style-type: none"> Acquires knowledge regarding history of the subject and early theoretical contributions . Learns the contributions of Indian thought in Psychology. Gets an overview about the eastern and western perspectives in Psychology.
PSY-PG-102	Research Methodology – I	<ul style="list-style-type: none"> Learns about the basics of scientific research in Psychology. Understands research ethics. Learns about hypothesis testing. Learns the various statistical techniques in terms of their assumptions, applications and limitations. Learns about how to enter and analyse data in SPSS
PSY-PG-103	Advanced Social Psychology	<ul style="list-style-type: none"> Understands human behavior from some of the major theoretical perspectives in social psychology Understands the concepts of social behaviour, social influence, social perception, relationships and group processes. Learns the applications of social psychological concepts in the real world.
PSY-PG-104	Psychological assessment	<ul style="list-style-type: none"> Acquires various perspectives on psychometrics.. Learns about the nature and uses of psychological test with the specific examples of intelligence, ability and personality tests. Learns test construction.
PSY-PG-201	Cognitive Psychology	<ul style="list-style-type: none"> Becomes familiarized with the emergent fields of cognitive psychology and neuroscience. Understands the functioning of cognitive processes from various theoretical perspectives. Learns the practical implications of cognitive processes in human performance.
PSY-PG-202	Psychology of Personality	<ul style="list-style-type: none"> Acquires knowledge regarding the determinants of personality. Understand human personality from the viewpoint of various theories.
PSY-PG-203	Research Methodology – II	<ul style="list-style-type: none"> Gets familiarized with the basics of Qualitative Research in Psychology. Learns the various methods in Qualitative Inquiry, data collection and analyzing of data. Learns about ethics in qualitative research and how to conduct credible and trust-worthy qualitative research.
PSY-PG-204	Practicum – I	<ul style="list-style-type: none"> Learns how to conduct experiments in controlled laboratory setting Gets familiarized with with the various psychology laboratory tools and equipments. Learns to analyze and interpret the findings of the experiments/tests.

		<ul style="list-style-type: none"> • Gets familiarised with scientific report writing.
PSY-PG-301	Health Psychology	<ul style="list-style-type: none"> • Gets an understanding of the integration between biological, psychological and social factors in health and disease (the bio-psycho-social health model). • Understands health behaviours and how to change health behaviours. • Understands the role of stress in health and learns to the management of illnesses. • Learns the management of chronic health conditions from health psychology perspective.
PSY-PG-302-A OR PSY-PG-302-B OR PSY-PG-302-C	Clinical Psychology OR Developmental Psychology OR Organisational Behaviour	<ul style="list-style-type: none"> • Gets familiarized with the history and development of clinical psychology as a field in India and its evolving professional identity. • Gets oriented to major theoretical models which guide clinical psychological practice and research. • Learns about clinical assessment process and its applications in various domains. <p>OR</p> <ul style="list-style-type: none"> • Learns about the historical and philosophical roots of developmental psychology. • Learns about the genetic foundations of development. • Understands development from lifespan perspective. • Gets oriented with current issues and concerns in the field. <p>OR</p> <ul style="list-style-type: none"> • Understands the scope of Organizational Psychology. • Gets acquainted with current issues and challenges in the organizational sector. • Learns about influences of individual differences, organizational culture and leadership on organizational behavior.
PSY-PG-303-A OR PSY-PG-303-B OR PSY-PG-303-C	Psychopathology OR Child and Adolescence Psychology OR Training and Development in Organisations	<ul style="list-style-type: none"> • Understands the concept of psychopathology from various theoretical perspectives. • Learns about the use of classification models for psychopathology. • Learns about the features and etiology of common mental disorders. <p>OR</p> <ul style="list-style-type: none"> • Gets an overview about the normal developmental process in childhood. • Learns about the developmental challenges in childhood, child psychopathology and the therapeutic approaches in dealing with childhood psychopathology. <p>OR</p> <ul style="list-style-type: none"> • Understands the role of training in organizational settings. • Gets acquainted with training methods and acquires the appropriate knowledge to develop training modules. • Gets familiarized with measurement of training outcomes.
PSY-PG-304	Practicum – II	<ul style="list-style-type: none"> • Gets familiarized with the administration, scoring, analyses and interpretation of psychological

		<p>tests.</p> <ul style="list-style-type: none"> • Develop basic skills of observation, interviewing, case history taking and report writing. • Acquires skills to do assessment in the field setting.
PSY-PG-401	Educational Psychology	<ul style="list-style-type: none"> • Gets familiarized with the field of Educational Psychology and the role of development in education. • Understands the application of Psychology in the class room. • Gets familiarised with the concepts of assessment and grading in education. • Understands issues about individual differences and how to address such differences in the classroom.
PSY-PG-402 Choice Based Credit Paper	Positive Psychology	<ul style="list-style-type: none"> • Gets familiarised with the emerging paradigm of Positive Psychology and to recognize what contributes and what does not contribute to happiness and the role of positive emotions and traits in enhancing happiness. • Learns about positive psychology perspective on illness and health and to apply positive psychology in clinical intervention and in various settings.
PSY-PG-403-A OR PSY-PG-403-B OR PSY-PG-403-C	Psychotherapy and Counselling OR Adulthood and Aging OR Human Resource Development	<ul style="list-style-type: none"> • Acquires knowledge and skills for various psychotherapeutic and counselling techniques in treating emotional problems and mental disorders. • Learns the application of counselling skills in different settings. <p>OR</p> <ul style="list-style-type: none"> • Understands the developmental processes through various theoretical perspectives. • Understands the major concerns and challenges faced in adulthood and later life and to understand the role of government policies on ageing and care of the elderly. <p>OR</p> <ul style="list-style-type: none"> • Gets an orientation to HR and understands the role of Psychology in HR sector. • Gets familiarized with recruitment planning and work force planning. • Learns about career and competency mapping.
PSY-PG-404	Project/Dissertation	<ul style="list-style-type: none"> • Learns how to write a good research proposal. • Gets familiarised with the process of Review of Literature. • Able to apply the appropriate methodology in conducting research. • Learns how to carry out ethical research work. • Learns to enter and analyse data in SPSS. • Acquires skills of scientific report writing.

**Department of Agricultural Engineering and
Technology**

Programme outcomes

- From the programme students will get an idea about the different sources of Farm Power like renewable and non-renewable required to mechanized agriculture.
- A student will learn the basic of electrical circuit, motor and its construction.
- Upon completion of the B.Tech. in agricultural Engineering and Technology, students are expected to have sound knowledge of the food processing technique and engineering behind it. Need of food processing, drying and pckaging with different methods. This core knowledge is essential in any agricultural related profession.
- Further, the programme provides knowledge of unit operation in dairy technology along with hands-on training on preparation of dairy products.
- Programme also allows students to learn about byproduct utilization and Organic Farming which is most essential and having more demand.
- Safety is most important during execution of agricultural work mainly with machinery. The course allows students to learn about it.
- The technical students don't get opportunity to know about the constitution of India since, they divert their aim to acquire technical degree. The programme, also give the opportunity to know about the Indian constitution paralleley with technical education which is most important.
- The coverage of the programme allows the students to consider different competitive exams such as CSIR-NET, GATE, ICAR, ARS etc.

Programme Specific Outcomes

- Students would be able to get the technical knowhow of Agricultural Engineering, and the responsibilities of Agricultural Engineer to increase the production and productivity.
- After acquiring the degree, students would be able to guide the user of farm machinery how properly the field machinery should be used.
- Students will have some basic knowledge, how to establish Custom Hiring Centre (CHC), farm machinery bank, food processing plant etc.

Course Outcomes

Semester	Course Code	Course Name	Course outcome
III	AE3T03	Farm Power	(i) The students will apply technology and science to create agricultural machinery, structures, and equipment to improve agricultural production. (ii) <i>Agricultural Engineering students will use their knowledge to solve the problems of farmers and the agro-industry.</i> (iii) Acquire knowledge <i>how to make farming sustainable, safe, and environmentally friendly.</i> (iv) Will come to know how to make conducive working environment for the farmer. (v) Students will learn how to mechanize the farming to make food available in adequate quantity and quality at the right time of need and at a reasonable cost to the consumers. (vi) The course will give idea, how to maintain the environment health by reducing the level of pollution.
	AE3L02	Farm Power Lab	
	AE3T04	Electrical Machine & Power utilization	
IV	AE4T02	Theory of Machines	
	AE4T06	Crop Process Engineering	
	AE4L02	Crop Process Engineering Lab	
V	AE5T01	Workshop Technology	
	AE5T06	Drying & Storage Engineering	
	AE5L03	Drying & storage engineering Lab	
VI	AE6T01	Agriculture for Engineers	
	AE6EL01	Agribusiness management and trade	
	AE6EL03	Design and maintenance of green house	
VII	AE7T03	Unit Operation in Dairy and Food Engineering	
	AE7L02	Unit Operation in Dairy and Food Engineering Lab	
VIII	AE8T02	Food Process and Packaging Technology	
	AE8L02	Food Process and packaging technology Lab	
	G8T01	Indian Constitution	
	AE8EL01	Human Engineering and safety	
	AE8EL02	Biomass management for fodder and energy	
	AE8EL04	Renewable Energy Source	
	AE8EL05	Organic Farming for Sustainable Agricultural Production	

**Department of Electronics and Communication
Engineering**

Programme Outcomes

- Ability to acquire and apply knowledge of mathematics, sciences, electronics and Communication engineering.
- Ability to identify, formulate and solve engineering problems, design a system, component or process to meet desired needs.
- Ability to use techniques, skills and modern engineering tools necessary for engineering practices so as to be easily adaptable to industrial needs.
- Understanding of the social, cultural, global and environmental responsibilities of a professional engineer.
- Understanding of professional, ethical responsibilities, commitment to the community and the ability to function on multi-disciplinary teams.
- Apply research-based knowledge to design and conduct experiments, analyze, synthesize and interpret the data pertaining to Electronics & Communication Engineering problems and arrive at valid conclusions.
- Apply the contextual knowledge to assess social, health, safety and cultural issues and endure the consequences responsibilities relevant to the professional engineering practice.
- Design system components that meet the requirement of public safety and offer solutions to the societal and environmental concerns.
- Examine the impact of engineering solutions in global and environmental contexts and utilize the knowledge for sustained development.
- Develop consciousness of professional, ethical and social responsibilities as experts in the field of Electronics and Communication Engineering.
- The technical students don't get opportunity to know about the constitution of india since, they divert their aim to acquire technical degree. The programme, also give the opportunity to know about the Indian constitution parallely with technical education which is most important.
- The coverage of the programme allows the students to consider different competitive exams such as CSIR-NET, GATE, RBI, SSC, UPSC(IES), UPSC(IAS), etc

Programme Specific Outcomes

- Ability to apply the fundamental concepts of electronics and communication engineering design a variety of components and systems for applications including signal processing, image processing, communication, networking, embedded systems, VLSI and control system.
- Ability to Select and apply cutting-edge engineering hardware and software tools to solve complex Electronics and Communication Engineering problems.
- Apply principles of Engineering Mathematics, Physics and core engineering including applications appropriate to the Electronics & Communication Engineering.
- Apply basic knowledge related to Electronic Devices & Circuits, Electromagnetics, Digital Signal Processing, Communication Engineering and Embedded Systems to solve engineering problems.
- Demonstrate proficiency in use of software and hardware required in real life applications.

Course Outcomes

Semester	Course Code	Course Name	Course Outcome
III	EC3T01	Network Theory	To provide basic knowledge to analyse and synthesize complex electronic circuit for its advance application.
	EC3T02	Electronic Devices & Circuits	To have knowledge of fundamental of electronic device to apply to design and development of complex electronic circuits
	EC3T03	Digital Electronics & Logic Design	To have knowledge of digital electronics so as to attain strong base to analyze, design and develop complex digital systems.
	EC3T04	Electrical Engineering Material	To Understand the various kinds of materials and their applications in ac and dc fields.
	ITB303	Data Structures & Algorithm	To provide the in-depth knowledge of processing of data for specific application in engineering
	MAT3T1	Mathematics-III	To understand the Knowledge of mathematics required to solve complex engineering problems.
	EC3L01	Electronic Devices & Circuits Lab	To make concept of basic electronics very clear by understanding the properties of individual electronic components
	EC3L02	Digital Electronics & Logic Design Lab	To clear the concepts of digital components and digital circuits to design the complex digital circuits.
	ITB312	Data Structures Lab	Learn on structures, linked list, data for specific application in engineering
IV	EC4T01	Signals and Systems	To Understand the behavior of various signal and to analyse system and various system
	EC4T02	Electromagnetic Field Theory	To attain knowledge of electromagnetic theory to have ability to analyse communication theory and system
	EC4T03	Microprocessor	To understand and to be able to do the programming of microprocessor to use it in designing and development of complex electronic system.
	EC4T04	Linear Integrated Circuits	To design and development complex electronic system using integrated circuit.
	EC4T05	Electronic Measurements & Instrumentation	To understand the functionality of measuring instrument for analyse and interpretation of data.
	MAT4T1	Mathematics –IV	This course familiarize the students with partial differential equation, their application and statistical techniques. It aims to present the students with standard concepts and tools at an intermediate to superior level that will provide them well towards undertaking a variety of problems in the discipline.
	EC4L01	Microprocessor Lab	To be able to program in assembly language

			of microprocessor and to be able to interface the peripheral devices.
	EC4L02	Linear Integrated Circuits Lab	To design and development complex electronic system practically using integrated circuit.
V	EC5T01	Antenna & Wave Propagation	To understand in depth the antenna and wave propagation to use it in communication system effectively and to have knowledge on contemporary issues.
	EC5T02	Introduction to VHDL	Design and verify the functionality of digital circuit/system using test benches. Identify the suitable Abstraction level for a particular digital design. Write the programs more effectively using Verilog tasks and directives. Perform timing and delay Simulation.
	EC5T03	Analog Communication	Study Elements of Communication System and its Fundamental Limitation, Modulation: types, Benefits and Applications.
	EC5T04	Microcontroller	To be able to do programming of 8051 microcontroller and to design and develop the project/embedded system based on microcontroller system.
	EC5T05	Control Systems	To study the components of control system and to be able to make analysis and performance behaviour of control system.
	EC5T06	Management & Entrepreneurship	To Understand the fundamental concepts of Management and Entrepreneurship. To learn about the resources and the utilization in the present market.
	EC5L01	Microcontroller Lab	Study on Programming and interfacing
	EC5L02	VHDL Lab	To Demonstrate knowledge on VHDL design flow, digital circuits design, switch debouncing, metastability, memory devices applications. Design and develop the combinational and sequential circuits using behavioral modeling
VI	EC6T01	Digital Communication	To understand broadly and performance analysis of digital communication system and to be able to understand the further evolving technologies with their platform.
	EC6T02	Digital Signal Processing	To have in depth knowledge in Digital Signal Processing.
	EC6T03	VLSI Technology	To learn VLSI designing to design and develop complex electronic circuits
	EC6T04	Computer Communication Networks	To know internet protocols and standard, IEEE standards, network and data communication in detail, to implement in designing and development of communication system.

	EC6T05	Wireless Communication	To study mobile and wireless communication which is necessary to understand the impact of engineering solution in global economic, environmental, societal context and to have knowledge of contemporary issues.
	EC6T06	Information Theory Coding	Explain concept of Dependent & Independent Source, measure of information, Entropy, Rate of Information and Order of a source.
	EC6L01	Communication Systems Engineering Lab	To study and use the various components in communication system
	EC6L02	Digital Signal Processing Lab	To study the MATLAB programming in order to analyse the behavior of various transforms and digital filters
VII	EC7T01	Microwave Engineering	To understand in detail the microwave engineering in communication system.
	EC7EL1	Embedded System & Design	To Acquire knowledge about devices and buses used in embedded networking. Develop programming skills in embedded systems for various applications
	EC7EL3	Biomedical Instrumentation	To Understand the physiology of biomedical system. Discuss the application of Electronics in diagnostics and therapeutic area
	EC7EL2	Operating Systems	Explain the goals, structure, operation and types of operating systems. Apply scheduling techniques to find performance factors.
	EC7EL4	Multimedia Communication	Describes technical characteristics and performance of multimedia system and terminals, design creative approach in application of multimedia devices, equipment and systems.
	EC7EL5	Optical Fiber Communication	Demonstrate an understanding of optical fiber communication link, structure, propagation and transmission properties of an optical fiber.
	EC7EL6	Power Electronics	Relate basic semiconductor physics to properties of power devices, and combine circuit mathematics and characteristics of linear and non-linear devices. Formulate and analyze a power electronic design at the system level and assess the performance.
	EC7SM	Colloquium*	To interact with industry to understand the practical implementation of the theoretical aspects.
	EC7L01	Microwave Engineering Lab	To Analyze typical microwave networks using impedance, admittance, transmission and scattering matrix representations.
	EC7PJ	Project**	An ability to manage project by own made or as a member or as a leader in a team to use the technics, skills and modern engineering tools necessary for engineering practice and

			to have the knowledge on contemporary issues and ability to function in multidisciplinary settings and to have ability to design a system, component or process to meet desired need within realistic constraints
VIII	EC8T01	Digital Image Processing	To Understand image formation and the role human visual system plays in perception of gray and color image data. Design image analysis techniques.
	EC8EL8	Nano Technology	To understand principles behind Nanoscience engineering and Nanoelectronics.
	EC8EL7	Body Area Network	Study about BAN, Sensors , hardware of BAN, wireless communication and network, issues with BAN.
	EC8EL9	Speech Processing	Understand the speech production and perception process.Analyze speech signals in time and frequency domain.Design and implement algorithms for processing speech signals.
	EC8EL11	Cryptography & Network Security	Analyze and design classical encryption techniques and block ciphers. Understand and analyze data encryption standard. such as Diffie-Hellman Key Exchange, ElGamal Cryptosystem, etc. Protocols.
	EC8EL12	Fundamentals of MEMS	Ability to understand the operation of micro devices, micro systems and their applications. Gain a knowledge of basic approaches for various sensor design.
	EC8EL10	Wireless Cellular and LTE 4G Broadband	To Understand the system architecture and the functional standard specified in LTE 4G.
	G8T01	<i>Constitution of India (MC)</i>	Learn on history and general information, International relations and contemporary political issues, constitutionalism & Indian political system, Public administratirses.

Department of Biotechnology

Programme Outcomes

Upon completion of this course student will be able to:

- Acquire knowledge of basic sciences, engineering, and biological sciences (basic and advance).
- Address problems and find solutions to the complex issues of agriculture, environment, and human health through application of biotechnological tools and techniques.
- Identify the relevant researchable issues/topics based on literature survey, formulate a proposal and analyze complex biological problems for arriving at substantiated conclusions using an integrated approach considering public health and safety, societal, and environmental implications.
- Perform their duties effectively as an individual and as a member or leader in diverse teams in multidisciplinary settings for carrying out challenging tasks and providing acceptable solutions involving views of members for increased productivity.

Programme Specific Outcomes

- Students will know how to solve some biological problems using computational tools and algorithms.
- Acquire knowledge in the biotechnology domain that enables their applications in industry and research.
- Students will be able to clone DNA insert into a vector for overexpression of protein.
- Students can perform protein purification by affinity chromatography techniques.
- Students will have some basic training about literature review, journal publications, quality journals etc. which will help the student in his/her future research programme.

Course Outcomes

Semester	Course No	Course Name	Course Outcome
I	G1T01	Engineering Mathematics-I	Student will gain fundamental knowledge in mathematics and its applications relevant to various streams of Engineering and Technology.
	G1T02	Engineering Physics-I	Student will gain fundamental knowledge in Physics and its applications relevant to various streams of Engineering and Technology.
	G1T03	Technical English	Student will acquire basic proficiency in English including reading and listening comprehension, writing and speaking skills.
	G1T04	Basic Electrical Engineering	Students will learn different applications of commonly used electrical machinery.
	G1T05	Engineering Chemistry	Student will learn the basic phenomenon/concepts of chemistry, the student faces during the course of their study in the industry and Engineering field.
	G1T06	Engineering Graphics	The student will learn: <ul style="list-style-type: none"> ● Introduction to engineering design and its place in society. ● Exposure to the visual aspects of engineering design. ● Exposure to engineering graphics standards.
	G1L01	Engineering Physics-I Lab	
	G1L02	Engineering Chemistry Lab	
	G1L03	Engineering Graphics Lab	
II	G2T01	Engineering	

		Mathematics-II	
	G2T02	Engineering Physics-II	
	G2T03	Fundamentals of Computing	
	G2T04	Basic Electronics	
	G2T05	Engineering Mechanics	
	G2T06	Environmental Science	
	G2L01	Workshop Practice	
	G2L02	Basic Electronics Lab	
	G2L03	Fundamentals of Computing Lab	
	G2L04	Engineering Physics-II Lab	
	AU102	Sports and Yoga	
III	BTB301	Biostatistics	
	BTB302	Biochemistry	Students will able to know properties of biological molecules, their biosynthesis and metabolism
	BTB303	Microbiology	Students will able to know the growth and control of microbes as well as different techniques involved in microbiology.
	BTB304	Thermodynamics and Kinetics	
	CSB302	Data Structures & algorithm	
	BTB305	Engineering Economics	
	BTB311	Biochemistry Lab	
	BTB312	Microbiology Lab	
	CSB312	Data Structures & algorithm Lab	
IV	BTB401	Cellular Metabolism and Metabolic Engineering	
	BTB402	Plant Biotechnology	Student will be able to understand the concepts and principles of Plant tissue culture.

	BTB403	Cell & Molecular Biology	
	BTB404	Genetics	Students will acquire a broad understanding of current molecular genetics and genomics
	BTB405	Green Biotechnology and Pollution Abatement	Students will gain knowledge about how to maintain the environment. They will also gain the knowledge to use biotechnology for waste management, bioremediation, and green energy.
	BTB406	Structural Biology	Students will gain an understanding of the basic science of Protein and Nucleic Acid (DNA and RNA) structure, including first principles of physical interactions that maintain proteins and the mechanisms that make them intact.
	BTB411	Molecular Biology Lab	
	BTB412	Plant Biotechnology	
V	BTB501	Bioinformatics & Computational Biology	Students will develop computational skills relevant to solving problems in bioinformatics
	BTB502	Enzyme Technology	
	BTB503	Immunology & Immunotechnology	
	BTB504	PROFESSIONAL ELECTIVE COURSE[PE]-I	
	BTB505	OPEN SUBJECT-I	
	BTB505	Entrepreneurship and Startups	
	BTB511	Bioinformatics & Computational Biology Lab	
	BTB512	Immunology & Immunotechnology Lab	
	BTB513	Training	
VI	BTB601	Recombinant DNA Technology and Applications	Student will come to know about application of rDNA technology for the production of vaccines and protein therapies such as human insulin, interferon and human growth hormone.

	BTB602	Bioseparation Engineering	The students will learn how to separate and purify to homogeneity molecules and biological macromolecules of interest using different technologies. The course will also introduce how to scale up the separation in a cost effective manner.
	BTB603	Synthetic & Systems Biology	Students will learn the concept of synthetic biology and its widespread applications in research and industry. They will be able to assemble DNA and genes into biological circuits to make a biosensor or even engineer organisms.
	BTB604	Animal Biotechnology	
	BTB605	PROFESSIONAL ELECTIVE COURSE[PE]-II	
	BTB606	OPEN SUBJECT-II	
	BTB611	Bioseparation Engineering Lab	
	BTB612	Recombinant DNA Technology Lab	
VII	BTB701	Intellectual Property Rights (IPR) & Regulatory	
	BTB702	Bioprocess Engineering	
	BTB703	PROFESSIONAL ELECTIVE COURSE[PE]-III	
	BTB704	OPEN SUBJECT-III	
	BTB705	Synthetic & Systems Biology	
	BTB706	Analytical Techniques	At the end of the course, student would be able to understand and apply modern analytical techniques used in biotechnology.
	BTB711	Bioprocess Engineering Lab	
	BTB712	Project-I	
	BTB713	Colloquium	
VIII	BTB801	Constitution of	

		India*	
	BTB802	PROFESSIONAL ELECTIVE COURSE[PE]-IV	
	BTB803	OPEN SUBJECT-IV	
	BTB811	Project-II (Biotech Industrial or Biotech In-house Project or Bio- Entrepreneurship)	Students will have some basic training about literature review, journal publications, quality journals etc. which will help the student in his/her future research programme.

Department of Management

Programme Outcomes

1. To introduce the Management Education to the people of the state of Nagaland.
2. To develop professionals who are committed to excellence in their personal and professional endeavours and who have the vision, courage and dedication to initiate and manage change.
3. To cater to the emerging needs of business enterprises in both traditional and new economy.
4. To groom future business leaders as well as entrepreneurs.

Programme Specific Outcomes

1. Through the MBA Programme, the students will be equipped to cope up with the challenges in the corporate world. Emphasis of the Programme is to make students equipped with Managerial skills required for the 21st century.
2. Another Programme outcome is to train the students so that they become a successful entrepreneur. Courses of Entrepreneurship are included in the MBA Programme structure. Some of the students who passed out from the department have ventured into Entrepreneurial activities.
3. Over the years, the students who have passed out from the department were placed in reputed companies such as Banks, Financial Institutions, Telecom, Retail etc. Therefore in order to fulfil the market requirement for MBA graduates, courses like MGT-202: Principles and Practices of Banking, MGT-122: Internet Marketing, MGT-123: Retail Management etc were introduced and revised time to time.
4. In order to develop academic skills of the MBA graduates due emphasis is given on Research Methodology with a special focus on Marketing Research. The students are required to write a Dissertation report in the 2nd year of their study.
5. The students need to undergo a compulsory Summer Internship in any corporate houses at the end of second semester for a period of minimum 45 days. This enables the students to experience the real time work environment in the corporate houses.

M.Sc. (Ag.) Programme

Programme Outcomes

- Students will learn all aspects of production and management of cattle, buffalo, sheep, goat, swine, laboratory animals and poultry theoretically and practically which will enable them to establish livestock and poultry farms, provide consultancy services, train farmers and get employment in educational institutions and livestock sectors and others.
- Create jobs through commercial livestock units and prepare bankable and innovative projects.
- To prepare the students to be high quality professionals in the field.
- Qualify them to appear in competitive exams such as ICAR- NET, ARS and also help them to take up higher studies in India and abroad.
- Ensure employability.
- Gain experience in research projects.

Programme Specific Outcomes

- Acquire knowledge and skill in all aspects of livestock and poultry and will enable the students to take up or carry out any activity related to these sectors.
- Stimulate critical thinking to prepare, plan and execute scientific research. They will be able to carry out innovative research in livestock, laboratory animals and poultry which will help to contribute towards their development and benefit livestock farmers.
- Use their expertise to develop infrastructure facilities for livestock and prepare economic livestock feeds for livestock.
- Operate farm equipments, laboratory instruments, collect blood samples and analyze various haematological and biochemical blood parameters.
- Learn data collection, data handling and analysis, thesis writing, stimulate creative writings for publication in scientific journals and magazines. Able to share the scientific data generated from their research work with the scientific community in particular and the public domain in general.
- Able to prepare project for external funding and commercial projects.

Department of Entomology

Programme Outcomes

- Students learn the basic and fundamentals of Agricultural entomology and its application
- Students get acquainted in pest management of horticultural and field crops and other economic aspects.
- Upon completion of B.Sc(Hons.) degree programme the students are expected to have basic knowledge about the subject matter both theoretical and practical, particularly in pest management of economic crops.
- The knowledge gained is expected to be disseminated to the grass root level farmers upto the progressive farmers, entrepreneurs etc.

Programme specific outcomes

- Students would be able to identify the taxonomic classification of insects and also help the farmers in identifying the pest problem in the field.
- Student will be able to recommend and come up with management strategies and techniques to tackle the insect pest population in field conditions.

Course Outcomes

Sl. No.	Course No.	Course Name	Course outcome
1.	ENT-102	Fundamentals of Entomology	<ul style="list-style-type: none"> • The students will learn the technique of insect collection and preservation. • Developing skills to identify insects based on their morphological characters • Knowledge on physiological system in insects through dissections
2.	ENT-202	Pest of Horticultural Crops and their Management	<ul style="list-style-type: none"> • The students will develop confidence to address the insect pest problems of farmers both of horticultural and field crops as well as storage grains so that immediate management tactics steps can be taken up to check the pest population which can avoid significant crop damage • These two courses lay the foundation for higher studies in the field of entomology
3.	ENT-301	Pest of Field Crops, Stored grains and their Management	
4.	ENT-302	Management of Beneficial Insects	<ul style="list-style-type: none"> • Skill development in apiculture, sericulture and lac culture which leads to entrepreneurship opportunities • Development of skills in identifying, conservation methods and field application of those beneficial insects like predators and parasitoids,
5.	ELP-2	Commercial Sericulture*	<ul style="list-style-type: none"> • Expertise and will develop confidence to start their own enterprise • Thorough knowledge of technical skills in <ol style="list-style-type: none"> a) Rearing silkworm for commercial purpose b) Pests and diseases management, skills on handling rearing appliances and methods of disinfection
		Commercial Apiculture*	<ul style="list-style-type: none"> • Expertise and gain confidence to start their own enterprise • Thorough knowledge of technical skills in <ol style="list-style-type: none"> a) Bee keeping for commercial purpose b) Seasonal management of hives c) Bee enemies and diseases management
6.	RAWEP-412	Plant Protection Intervention	<ul style="list-style-type: none"> • Exposure to natural setting of the village situations • Knowledge of farmers and their farm related

			<p>problems with special reference to plant protection</p> <ul style="list-style-type: none">• Applications of various extension tools for transferring agricultural technologies like preparation of plant products, biocontrol agents and application of pesticides in the right way
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**Department of Livestock Production and
Management**

Under Graduate

Programme Outcomes

- Familiarized with terminologies related to livestock and poultry, current status, breeds, feeds and fodders and understand the importance and role of livestock.
- Gain theoretical and practical knowledge related to all aspects of livestock and poultry management including housing, feeding, breeding and health care.
- On completion, students will be able to start livestock farming for self employment and also create jobs.
- Help to prepare them for higher studies and appear in competitive exams.

Programme Specific Outcomes

- Students will be able to identify breeds of livestock and poultry, able to rear them, prepare own feed, successfully handle and restrain the animal, administer medicine and vaccine.
- Prepare business plan and execute successfully.
- Use their expertise to plan and establish viable commercial livestock and poultry units.
- Prepare marketable value added livestock products and can start entrepreneurial activities, develop marketing strategies.

Course outcomes

Semester	Course No	Course Title	Course outcome
I	LPM-101	Livestock and poultry management	<ul style="list-style-type: none"> • Acquire knowledge on external body parts and basic differences between male and female livestock species and poultry. • Know how to approach farm animals and restrain them using different techniques practically. • Learn different methods of identification followed in livestock and poultry. • Identify different feed ingredients and able to compute animal ration. • Able to rear farm animals maintain farm records , calculate economics of livestock production.
II	LPM-201	Swine production and management	<ul style="list-style-type: none"> • Correctly identify different body parts, their names and know the basic differences between male and female swine. • Confidently approach , handle and restrain swine. • Accurately judge and select breeding and meat hogs • Learn different methods of identification followed in swine. • Able to select breeding and meat animals, identify gilts and sow in heat. • Learn how to castrate pigs. • Identify different feed ingredients and will be able to compute ration for different age group of swine. • Knowledge on how to maintain farm records and able to calculate economics of pig production.
VII	SRP-I) ELP ELP-3	Experiential Learning Programme-Poultry production technology	<ul style="list-style-type: none"> • Learn how to prepare business plan and execute. • Able to rear poultry birds, prepare different value added products and generate income. • Skill enhancement and can take up poultry farming for self employment and create jobs as well. • Become efficient in marketing • Develop confidence and communication skill.

	ELP-6	Experiential Learning Programme-Dairy production technology	<ul style="list-style-type: none"> • Learn how to prepare business plan and execute. • Able to rear dairy animals, prepare different value added products and generate income. • Skill enhancement and can take up dairy farming for self employment and create jobs as well. • Become efficient in marketing • Develop confidence and communication skill.
VIII	RAWE-414	Rural Awareness Work Experience- Livestock production and management interventions	<ul style="list-style-type: none"> • Personal interaction with local farmers of rural areas and understand their problems and constraints in rearing livestock and poultry and provide solution. • Identify technological gaps and training needs. • Able to disseminate knowledge to farmers on improved livestock management practices through practical demonstration. • Develop communication skills and confidence. • Learn the status of different government schemes implemented with respect to livestock development in the villages. • Learn ITKs in livestock management as practiced by farmers. • Prepare the students to reach out to the farming community through the experience they gain.

Post Graduate

Course outcomes

Semester	Course No	Course Title	Course outcome
I	LPM-501	Cattle and buffalo production & management	Acquire knowledge and skill in all aspects of cattle and buffalo production and management including housing, feeding, breeding, healthcare and marketing.
	LPM-502	Sheep and goat production and management	Acquire knowledge and skill in all aspects of sheep and goat production and management including housing, feeding, breeding, healthcare and marketing.
	LPM-503	Swine production and management	Acquire knowledge and skill in all aspects of swine production and management including housing, feeding, breeding, healthcare and marketing.
	LPM-504	Laboratory animal production and management	Acquire theoretical and practical knowledge in production and management of laboratory animals
	LPM-505	Shelter management	Acquire knowledge on housing requirements of livestock and poultry; planning, layout and designing of animal sheds.
	LPM-506	Principles of environmental hygiene and Waste management	Gain knowledge in environmental protection, biosecurity measures to prevent incidences of animal diseases, production of quality livestock products and how to efficiently manage and convert animal waste to wealth.
	LPM-507	Poultry farm and hatchery management	Acquire knowledge and skill in all production and management aspects of chicks, broilers, layers and breeders including other avian species such as duck, turkey and quail. Learn egg incubation and hatchery management practices.
II	LPM-508	Climatology and animal production	Gain knowledge and understand the concept of livestock productivity in relation to climate, adaptation of livestock in different ecology, climate resilient animal sheds, able to estimate the microclimatic condition in animal houses.
	LPM-509	Integrated livestock farming system	Learn different integrated farming system models, integration of different livestock enterprises, economic analysis of livestock farming units.
	LPM-591	Master's seminar	Acquire knowledge in particular field/ topic related to the major subjects. Learn the art and skill of presenting information or relevant topics clearly and effectively, increase confidence level and it will also help to present their own findings with confidence.
	LPM-599	Master's research	Prepare, plan and execute scientific and innovative research in various aspects of livestock and poultry. Valuable research data can be generated. Important findings can be obtained and recommendations can be given.

Ph.D. in Livestock Production and Management

Programme Outcomes

- Students will be enriched with advance level of knowledge in production and management of cattle, buffalo, sheep, goat, swine, laboratory animals and poultry theoretically and practically which will enable them to establish livestock and poultry farms, provide consultancy services, train farmers and get employment in educational institutions, banking sectors, KVKs, university or departmental projects, livestock sectors and others.
- Create jobs through commercial livestock units and prepare bankable and innovative projects.
- Use their expertise to develop infrastructure facilities for livestock and prepare livestock feeds.
- Qualify them to appear in competitive exams such as ICAR- NET, ARS and also help them to take up post doctoral studies in India and abroad.
- Plan, prepare and execute scientific research and commercial projects.

Programme Specific Outcomes

- Acquire advance knowledge and skill in all aspects of livestock and poultry which will enable them to utilize their expertise in efficient livestock and poultry management.
- Stimulate critical thinking to prepare, plan and execute scientific research. They will be able to carry out innovative research in livestock, laboratory animals and poultry which will help to benefit livestock farmers and contribute towards their development.
- Operate farm equipments, laboratory instruments, treat animals, collect blood samples and carry out analysis of blood samples for haematological, biochemical and hormonal studies.
- Learn data collection, data handling and analysis, thesis writing, stimulate creative writings for publication in scientific journals and magazines. Able to share the scientific data generated from their research work with the scientific community in particular and the public domain in general.
- Know how to prepare project for external funding and commercial projects.

Course outcomes

Semester	Course No	Course Title	Course outcome
I	LPM-601	Advances in cattle and buffalo production & management	Acquire knowledge on recent advances and developments in all aspects of cattle and buffalo production and management .
	LPM-602	Advances in sheep and goat production and management	Acquire knowledge on recent advances and developments in all aspects of sheep and goat production and management .
	LPM-603	Advances in swine production and management	Acquire knowledge on recent advances and developments in all aspects of swine production and management .
	LPM-604	Advances in laboratory animal production and management	Acquire knowledge on recent advances and developments in all aspects of laboratory animal production and management.
	LPM-605	Advances in poultry production management	Acquire knowledge on recent advances and developments in all aspects of poultry production and management.
	LPM-606	Advances in environmental management	Learn recent advances and developments in environmental protection, biosecurity measures to prevent incidences of animal diseases, production of quality livestock products and converting animal waste to wealth,
II	LPM-691	Doctoral seminar I	Acquire knowledge in particular field/ topic related to major subjects. Learn the art and skill of presenting information or relevant topics clearly and effectively, increase confidence level and it will also help to present their own findings with confidence.
	LPM-692	Doctoral seminar II	Acquire knowledge in particular field/ topic related to minor subjects. Learn the art and skill of presenting information or relevant topics clearly and effectively, increase confidence level and it will also help to present their own findings with confidence.
III	LPM-699	Doctoral research	Prepare, plan and execute scientific and innovative research in various aspects of livestock and poultry. Valuable research data can be generated. Important findings can be obtained Based on the findings, recommendations can be given.

Department of Legal Studies

Programme Outcomes

The LL.M. curriculum has been formulated to train students with the essential dexterity and proficiency needed to exhibit these learning developments in colleges, profession and corporate precinct. After accomplishing the LL.M. degree, every student should be competent to counter the subsequent conditions:

The student should exhibit to ascertain and acknowledge the fundamental ideas in the Indian substantive law and be capable of applying its core concepts to the provided assortment of facts, ingenuity of legal evaluation, cogitating and decoding problems. The pupil should corroborate the information of the model, use on the provided facts and exhibit the honed acuity to the legal research. They should have an awareness of the international law, execute international research, exhibit sociable ability, including client interviewing and consulting, critical study, neutrality in legal drafting and cogent skills. They should exhibit expert judgement, morals and competency through actions compatible with the proficient values, standard and discipline. The pupil should be capable of comprehending, associating and retaining people from varied backgrounds and experiences in a variety of legal settings. The pupil should possess the knowledge and familiarity to the options available in the profession and employment routes obtainable by a legal professional.

Programme Specific Outcomes

A programme in legal education is one of the ingenious and methodical techniques of progressive education. Its metiers are to establish governance, decipherer, counsellor, adjudicator, legal culturist and value maker. It can be summed up as:

Assessment of a case verdict from different viewpoint: e.g., utilizing precedent, eloquence and ratiocinate; dependence on political, historic or economic sources and social or cultural ethics. Contrive an amalgamation of multitudinous case holdings to appropriately study, recognize and utilize statutes and other authorized rules to expound legal issues or form legal justifications. Acknowledge the cardinal theories and practice of legislative sanction and definition, association between statutes and cases, conventional and suitable use of clarification in legal issues. Prognosticate the likely judicial purpose of simulated legal arguments. Recognize and classify pertinent material facts in situations and incorporate pertinent rules of law from one or more predominant legal authorities. Recognize and assess similitude and variance between facts in the sources of the rules and in scenario facts.

Course Outcomes

Equip students to accomplish professional calibre, devotion to impartiality, solicitude and the highest moral standard of ethical values. Legal education forms the scope for career maturing, community service, management, self-confidence; acclimatize in global society and versatile approach to research. After accomplishing the course on legal education, students will be proficient in the vital and palmary evaluation of social issues. A course in legal education shall help in:*First:* suitability in the knowledge of law and legal profession. *Second:* suitability in regard to professional abilities. Fundamentals of Course outcome is as follows:

Careers: To evolve the academic capabilities of students so as to enhance legal knowledge and competencies. A career in law would help students to achieve success in every scope of their careerlike, administration, social reformer, self-employer, motivator, mediator, conciliator, legal advisor and the ideal part, creating a society.*Service:* Equip students to preserve and safeguard blended culture, secular principles, national development, serve community, provide legal service and contribute in dispute resolution mechanism.*Leadership:* Legal education would avail opportunities to students in their professional skills for collaboration, counselling and requirements for competent and ethical participation as leaders of the legal profession.*Faith on own capacity:* LL.M. students will exhibit a rudimentary understanding of global law, function in verbal communication and verbal arguments, elemental doctrine of administrative law, intellectual property laws and logical structure for observing functions of crucial legal system of the country.*Fine-tuning with the global society:* The students shall exhibit understanding of the universal principles of law including capacity of project management. *Inter-disciplinary approach of research:* Students normally work towards undertaking legal research and analysis, by acquiring quality legal education. It helps them to develop methodological skills to undertake interdisciplinary legal studies.



Director
Internal Quality Assurance Cell (IQAC)
Nagaland University, Lumami - 798627