MAHARAJA BIR BIKRAM COLLEGE

AGARTALA, TRIPURA

PROGRAMME SPECIFIC OUTCOMES (PSOs)
AND
COURSE OUTCOMES (COs)

PROGRAMME SPECIFIC OUTCOME(PSO)

BENGALI

Programme Specific Outcomes (PSOs)

The Department of Bengali in MBB college offers unique experience to the students taken admission in B.A programme. The programme is designed in such a way so as to provide a whole some knowledge about the subject and its application to the students. This programme is a 3 years programme with 6 semesters. The programme requires completion of a number of core courses in Bengali elective courses (as chosen by the students), skill enhancement courses, discipline specific courses as well as specialization. Moreover, to enhance students understanding of the applications and to have their research skills, the curriculum also and entails completion of project works and assignment. The discipline of Bengali literature enables to think and write creatively and critically. The course structure is blended with applied writing and creative thinking. BA in Bengali is a unique programme of interdisciplinary learning along with the core papers the department also organises and encourages seminar presentation, practical exposure etc.

Literature is one of the most interesting and significant expression of humanity. It is a subject which has an ability to transform and contribute to the overall development of an individual as well as the society. The theory thought alongside literature, in combination with analysis gives a student a power of perspective which is very essential for finding containment and peace in communication with different people in the society. Moreover, literature is a journey of finding or knowing one self, as it enables the students with the power of self-analysis and self-criticism, which is the most important factor of both career and character development. So, the discipline of Bengali literature enables to think and write creatively and critically. The subject explores many new ideas about life and society. The study of Bengali literature helps students to understand the subject Bengali and our society in its depth.

BOTANY

Programme Specific Outcomes (PSOs)

The undergraduate (UG) course offered by the Department of Botany, Maharaja Bir Bikram College, Agartala, strictly follows the CBCS syllabus prescribed by the UGC. The course is a combination of general and specialized education, simultaneously introducing the concepts of breadth and depth in learning. The fundamental aim of UG course is to produce competent plant biologists who can employ and implement their gained knowledge in basic and applied aspects that will profoundly influence the prevailing paradigm of agriculture, industry, healthcare and environment to provide sustainable development. The present curriculum will not only advance their knowledge and understanding of the subject, but will also increase the ability of critical thinking, development of scientific attitude, handling of problems and generating solution, improve practical skills, enhance communication skill, social interaction, increase awareness in environment related issues and recognize the ethical value system. Last and not the least to prepare the students for lifelong learning by drawing attention to the vast world of knowledge of plants and introducing them to the methodology of systematic academic enquiry.

Upon successful completion of B.Sc. Botany Under-Graduates are expected to-

PSO1: Develop a conceptual understanding of principles and importance of Botany. They will be able to demonstrate knowledge on selected topic of microbiology, cytology, and genetics, plant Biotechnology, angiosperm and be able to apply this knowledge to analyze a broad range of different phenomenon.

PSO2: Understand the nature and basic concept of Diversity of lower and higher plants, taxonomy, Anatomy, Physiology and Ecology Applied Botany, Cytogenetic and identify & classify the plant that occurs locally.

PSO3: to develop laboratory skill and be able to test soil, water, different physiological experiment. Applied course of Botany have tremendous scope in Floriculture.

PSO4: to demonstrate written and oral communication skills in communicating Botany – related topics and will provide and wok independently.

PSO5: to develop an understanding of the impact of botany and science on society and develop respect for conservation of environment.

CHEMISTRY

Programme Specific Outcomes (PSOs)

Chemistry plays a pivotal role for understanding the natural world from any perspective and also imparts the understanding of substances, their inter conversions and the making of materials for the benefit of humans. Chemistry utilizes the natural substances and creates artificial ones. This applied science is being explored to understand the behavior of living organisms and to develop new drug molecules for alleviating the complex diseases in diversified manner.

The undergraduate B.Sc. Programme in Chemistry enables the students:

PSO-1: To understand the fundamental chemical theories and their applications.

PSO-2: To become familiar with the different branches of Chemistry like Organic, Inorganic, Physical, Analytical, Environmental, Industrial, Biochemistry etc.

PSO-3: To acquire critical thinking skill, analytical skill, problem solving skill and data analysis skill.

PSO-4: To develop the ability to design, synthesize, separate and characterize the compounds.

PSO-5: To understand the cause of environmental pollution like air pollution, water pollution, soil pollution etc. in molecular level.

PSO-6: To understand the role of Chemistry to combat differential environmental pollution issues and how to develop sustainable world.

PSO-7: To inculcate planning and exploration of scientific ideas and research oriented skill among the students.

PSO-8: To explore the knowledge how computer may be useful in solving chemical problems.

PSO-9: To make the students efficient enough to work in chemical industry and scientific laboratories in time bound manner.

PSO-10: To develop scientific temperament, motivation a desire for applying knowledge of

chemical science for the welfare of the society.

COMMERCE

Programme Specific Outcomes (PSOs)

Bachelor of Commerce with core/ honours subjects is one of the very important subjects in the general degree courses. This course is very helpful not only for perusing M. Com but also other professional courses like Chartered Accountants, Cost Accountants, Company Secretary ship, MBA and any other professional courses and general degree courses in higher studies. This degree is equivalent to participate in the different competitive exams conducted by the different public service commission in the country including Union Public Service Commission (UPSC) and Tripura Public Service Commission (TPSC).

ECONOMICS

Programme Specific Outcomes (PSOs)

B.Sc. /B.A. (Honours) in economics undergraduate program has been designed with the objective to develop in-depth knowledge of students that, they are able to get admission in higher educational institutions and able to prepare themselves for competing various competitive exams. The objective is to prepare students to develop own thinking. At the end of the program the students will have adequate competency in the areas of economic theory.

EDUCATION

Programme Specific Outcomes (PSOs)

The students are awarded BA With Education Honours degree after successful Completion of three years/Six semesters of study. Within these semesters they have to undergo a total of 26 papers of 100 marks each having various categories of courses. There are 14(fourteen) papers in the subject Education throughout the semesters levelled as core courses. There are 2 (two) other papers known as Skill Enhancement Courses (SEC). Besides these 16 papers, there are 4(four) more papers named as Discipline Specific Electives (DSE). So, all total 20 papers of 100 marks

are taught in the Honours subject throughout six semesters. Only 6 (six) papers of 100 marks each are taught as other electives and foundation courses. So, a student of Education Honours has to pass out 20 papers in education and 6 papers in other subjects.

The students after obtaining B.A with Education Honours degree become eligible for higher studies in Education and also for employment in various jobs Especially the subject matter of education helps the students to attain the following outcomes.

1. **Knowledge: -** Study of Education as a subject enhances the basic knowledge of philosophy, sociology, psychology, Research, Technology. Management, Guidance and Counselling as well as the various ideas concepts and components of education as a discipline.
2. **Understanding: -** The subject matter of education helps the students to comprehend the real meaning of education and its important in human life. It also develops the understanding of life, aims of life and the various ways of achieving those aims.
3. **Application: -** Studying Education as a subject develops the ability of an individual to apply or use the acquired knowledge and experiences in the changing individual, social and professional or vocational life situations.
4. **Social Skills and Competencies**: - Education as a subject enables the individuals to acquire various personal and social skills which are essential in day to day living. It inculcates the moral, ethical and aesthetic values, social and national responsibilities.
5. **Development of proper attitude: -** Studying education as a subject helps to develop proper attitude towards life, society and nation. It also develops the sense of responsibilities of individuals as human beings.
6. **Employability: -** Studying the subject Education makes the individual eligible to get a job. Besides that, the knowledge and understanding of education develop good attitude, accountability and adaptability of an individual towards job or profession.

ENGLISH

Programme Specific Outcomes (PSOs)

The study of English literature helps the student to develop a thorough knowledge of literary history, theory and criticism and helps the students to think critically from different perspective. It gives an opportunity to discover how literature makes sense of the world through stories, poems, novels and plays. It also helps them to have good grasp over the language and the students can improve their communicative skill. The subject also enhances a person's writing skill. English is an international language, and is the language of media and internet hence whether it is for professional reasons or personal reasons, this language helps one to reach the goal.

ENVIRONMENTAL SCIENCE

Programme Specific Outcomes (PSOs)

The students will be acquiring a systematic knowledge on natural processes that sustain life, different resources and govern economy. They will be able to predict the consequences of anthropogenic actions on the environment, global economy and quality of human life. They will develop different strategies to protect biodiversity, sustainable development and proper way to manage non-renewable resources. They will adopt 3R as a practice in daily life. They will be getting the knowledge of different toxics which are being used as pesticides, fungicides in agriculture. Also, they will be getting the knowledge of e-waste and radioactive wastes and different bioremediation to control environmental pollution. They will also get to know about different environmental laws and policies.

GEOGRAPHY

Programme Specific Outcomes (PSOs)

Geography mainly concerns changes in spatial attributes in a temporal perspective. The Honours Programme in geography is tailored to meet the students' specific educational and professional goals in mind. It focuses on spatial studies, qualitative as well as quantitative, and emphasizes on human-environment relationship. After completing the course, the students will be amply prepared for professional careers in geography and allied disciplines like GIS and Remote Sensing. They will also be able to pursue M.A. /M.Sc. Course in Geography.

PSO1-Acquireing Knowledge of Physical Geography:

Student will gain the knowledge of physical geography. Student will have a general understanding about the geomorphological and geotechnical process and formation. They will be able to correlate the knowledge of physical geography with the human geography.

PSO2-Acquireing Knowledge of Human Geography:

They will be able to acquire the knowledge of Human Geography and will correlate it with their practical life.

PSO3-Ability of Problem Analysis:

Student will be able to analyze the problems of physical as well as cultural environments of both rural and urban areas. Moreover, they will try to find out the possible measures to solve those problems.

PSO4-Conduct social survey:

They will be eligible for conducting social survey project which is needed for measuring the status of development of a particular group or section of the society.

PSO5-Application of modern instruments:

Students will be able to learn the application of various modern instruments and by these they will be able to collect primary data.

PSO-6. Application of GIS and modern Geographical Map Making Techniques:

They will learn how to prepare map based on GIS by using the modern geographical map making techniques

PSO7-Development of Observation Power:

As a student of Geography Honours Course they will be capable to develop their observation power through field experience and in future they will be able to identify the socioenvironmental problems of a locality.

PSO8-Development of Communication Skill and Interaction Power:

After the completion of the project they will be efficient in their communication skill as well as power of social interaction. Some of the students are being able to understand and write effective reports and design credentials, make effective demonstrations, and give and receive clear instructions.

PSO9-Enhancement of the ability of Management:

Demonstrate knowledge and understanding of the management principles and apply these to their own work, as a member and leader in a team, to manage projects. They will perform effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PSO10-Understand Environmental Ethics and Sustainability:

Understand the impact of the acquired knowledge in societal and environmental contexts, and demonstrate the knowledge of need for sustainable development.

PSO11-Life-long learning:

Identify the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of societal and environmental change

HINDI

Programme Specific Outcomes (PSOs)

The students who have taken Hindi can develops a bonding with National language. The individual get's to know and understand the various intricacies of grammar and literature of Hindi. They gains the knowledge and understanding of the rich folk and cultural heritage of India. By learning of Hindi language, it will help them to think critically while studying Hindi literature. They will be eligible pursue higher studies. The students will be eligible to appear for the exams for jobs in government organizations such as UPSC, PCS, IFS, Banking sector etc.

HISTORY

Programme Specific Outcomes (PSOs)

We live in the present and plan for the future which has its own need and facilities, History surrounds us, it never lets one to forget our past easily. The subject is often utilised according to one's perspective and we realize that past is still alive and exists, giving a direction to the present.

The History programme enables the students to develop a better understanding of the world they are living in. They get to know how the society, governments and technology worked and why was there a need for change, and how the approach to future may be navigated. As they go through the all-inclusive syllabus they get to know of the historical events and trends, how the nation – states came into existence, the heritage and culture of the region over the past centuries, also understand the immigration pattern and can develop a sense of appreciation for the present day. They evolve as better decision makers, understands the need for changes, and hence learn to examine and interpret transformation of society and civilizations which enables them to understand the relationships between nations, societies, and human beings. Students can avail good opportunities to work in the field of archaeology, education and research.

KOKBOROK

Programme Specific Outcomes (PSOs)

- To analyze and evaluate the socio-cultural, economic and religious conditions of Tripura in the context of Kokborok Language, Literature, Folk Literature and culture.
- To develop skills in literary analysis, language analysis.
- Inspire research activities, research curiosity and skills in a variety of study areas.
- Prepare students not only for higher academics, but also gear them towards skill enhancement, aims and objectives of teaching Kokborok.

- To engage the students with various skills viz. drafting, style of writing and analytical skills.

MATHEMATICS

Programme Specific Outcomes (PSOs)

The Bachelor's Degree in B.Sc. (Hons) Mathematics is awarded to the students on the basis of knowledge, understanding, skills, attitudes, values and academic achievements sought to be acquired by learners at the end of this program. Hence, the learning outcomes of mathematics for this course are aimed at facilitating the learners to acquire these attributes, keeping in view of their preferences and aspirations for knowledge of mathematics. Mathematics is the study of quantity, structure, space and change. It has very broad scope in science, engineering and social sciences. The key areas of study in mathematics are Calculus, Algebra, Geometry, Analysis, Differential Equations, Statics and Dynamics.

The course B. Sc. (Hons.) in Mathematics

- Familiarize the students with suitable tools of mathematical analysis to handle issues and problems in mathematics and related sciences and to think in a critical manner.
- Acquire good knowledge and understanding to solve specific theoretical and applied problems in advanced areas of mathematics and statistics.
- Provide students/learners sufficient knowledge and skills enabling them to undertake further studies in mathematics and its allied areas on multiple disciplines concerned with mathematics. Encourage the students to develop a range of generic skills helpful in employment, internships and social activities.
- Bachelor's degree in mathematics is the culmination of in-depth knowledge of algebra, calculus, geometry, differential equations and several other branches of mathematics.
- This also leads to study of related areas like computer science, statistics and many more. Thus, this Programme helps learners in building a solid foundation for higher studies in mathematics.

- The skills and knowledge gained has intrinsic beauty, which also leads to proficiency in analytical reasoning. This can be utilized in modelling and solving real life problems. Students undergoing this Programme learn to logically question assertions, to recognize patterns and to distinguish between essential and irrelevant aspects of problems.

- They also share ideas and insights while seeking and benefitting from knowledge and insight of others. This helps them to learn behave responsibly in a rapidly changing interdependent society.

- Students completing this Programme will be able to present mathematics clearly and precisely, make vague ideas precise by formulating them in the language of mathematics, describe mathematical ideas from multiple perspectives and explain fundamental concepts of mathematics to non-mathematicians.

- Completion of this Programme will also enable the learners to join teaching profession in primary and secondary schools. This Programme will also help students to enhance their employability for government jobs, jobs in banking, insurance and investment sectors, data analyst jobs and jobs in various other public and private enterprises

PHILOSOPHY

Programme Specific Outcomes (PSOs)

After successful completion of the three years B. A. (Honours) degree programme in Philosophy, the students should be able to achieve the following outcomes:

PSO 1: The students of Philosophy (Hons) acquire knowledge about the different branches of Philosophy such as Classical Indian Philosophy, Metaphysics, Epistemology, Logic, Ethics, Religion, Social and Political Philosophy, Philosophy of Mind and Contemporary Indian and Western Philosophy.

PSO 2: They will acquire the knowledge about evaluative Knowledge of Reasoning and systematic argument formation ability.

PSO 3: In this programme, the students are also taught how to enhance critical thinking skills, ability to speak and defend a point of view which is reasoned.

PSO 4: Philosophy is vast in scope and intense in analysis and the Honours course tries to provide a taste of the extent of philosophy and the intensity of the argumentation and analysis at the same time.

PSO 5: Recognizing different values including different moral dimension of one's decision and thereby increase the power of responsibility of concerned.

PSO 6: The study of Philosophy shall build up confidence in students to preciously select a definite career path. The Programme incorporates a variety of modes of learning and teaching.

PHYSICAL EDUCATION

Programme Specific Outcomes (PSOs)

Physical Education is an Elective Subject in the college. Physical Education subject is a combination of all the subjects like: History of Physical Education, Health Education, Anatomy, Physiology, Kinesiology, Biomechanics, Sports Training, Sports Medicine and many more, so physical education aims at all round development of an individuals. Physical education also focuses in physical fitness and wellness. Students after attaining the degree with the subject, go for higher studies i.e., B.P.Ed and M.P.Ed. where the students with the subjects gets preference at the time of admission to the course

PHYSICS

Programme Specific Outcomes (PSOs)

Physics is the science of matter and its motion. Its English term Physics comes from the Greek word phusis meaning "nature with life" and phusika meaning "knowledge of nature". Its Sanskrit equivalent is Bhautiki that is used to refer to the study of the physical world. Very abstractly speaking; Physics is the Science that deals with the world around us try to understand.

B.Sc. Physics Courses offered undergraduate Programme in Physics with Mathematics and Chemistry as the subsidiary subjects and also Complementary physics for the students who have opted for the Mathematics and Chemistry as core subjects.

After completion of the Programme students will

- Get the core knowledge in Physics including the major domains of Mechanics, General properties of matter, Electricity & Magnetism, Modern Physics, Digital & Analog Electronics, Relativity, Heat & Thermodynamics, Solid State Physics, Classical Dynamics, Mathematical & Statistical Physics, Atomic, Molecular & Nuclear physics, Nanomaterial & its applications etc.

- Learn how to conduct experiments & understand the basic physics behind them.

- Get profound knowledge about the handling of laboratory instruments. They also develop interdisciplinary approach.

- Learn Programming languages like Basic, Scilab etc. to understand physical problems.
- This Programme also motivates the students towards research activities so that they can grow as a budding scientist and serve the society in their own way.

POLITICAL SCIENCE

Programme Specific Outcomes (PSOs)

This programme made students confident and self-reliant in their life. It enabled them to compete at various levels and make them employable and maintained an atmosphere in which students can think about the betterment of state and society. Most importantly, this programme inculcated responsibility and leadership among the students.

PSYCOLOGY

Programme Specific Outcomes (PSOs)

PSO1: To introduce students to the basic concepts and process of psychology with special emphasis of psychology in our day-to-day life

PSO2: To introduce the biological basis of behaviour, the influence of behaviour, cognition and the environment bodily system.

PSO3: To develop an understanding of the concept of individual differences

PSO4: To familiarise students with the basics of statistical methods and tools used in descriptive statistics of quantitative research

PSO5: To educate students with the process and methods of psychological research traditions

PSO6: To develop an understanding of the nuances of the social world as well as different perspectives on relations between individual and society and the realm of social influence and behaviour

PSO7: To develop an understanding of the concept and sources of stress and the relationship between stress and health

PSO8: To help learn about the different stress management techniques as well as coping techniques

PSO9: To educate students with the techniques of inferential statistics and hypothesis testing.

PSO10: To equip the learner with an understanding of the concept and process of human development across the life span and the various domains of human development.

PSO11: To understand the application of psychology in the area of education.

PSO12: To help learn about the various psychological disorders.

PSO13: To develop an awareness of the concepts related to organisational behaviour and develop an understanding of the connectivity between concepts and practices of organisations.

PSO14: To introduce the basic concepts of the growing approach of positive psychology and understand its application in various domains.

PSO15: To understand the relationship between psychological factors and physical health and learn how to enhance well-being.

PSO16: Help students develop an understanding of the clinical picture and dynamics of psychological disorders.

PSO17: To understand the therapeutic interventions for the various psychological disorders.

PSO18: To develop an understanding of basic concepts, process, techniques and challenges of counselling.

PSO19: To help students understand the various processes and issues inherent in organisations related to human resources.

PSO20: To learn the link between individuals and communities and deal with social issues more effectively with people's participation.

SANSKRIT

Programme Specific Outcomes (PSOs)

Literature is one of the most interesting and significant expression of humanity. It is a subject which has an ability to transform and contribute to the overall development of an individual as well as the society. The theory thought alongside literature in combination with analysis gives a student a power of perspective which is very essential for finding containment and peace in communication with different people in the society. Moreover, literature is a journey of finding or knowing oneself, as it enables the students with the power of self-analysis and self-criticism, which is the most important factor of both career and character development. So the discipline Sanskrit literature enables to think and write creatively and critically. The subject explores so many new ideas about life, diving and society. The study and practice of Sanskrit literature helps students to understand the subject Sanskrit. Our society and the world in its depth.

The department of Sanskrit in M.B.B. College offers a unique experience to the students taken admission in B.A. Programme. The Programme is designed in such a way, so as to provide a whole some knowledge about the subject and its application to the students. This Programme is a 3 years Programme with six semesters. The Programme requires the completion of a number of

core courses in Sanskrit, skills enhancement courses, discipline specific courses as well as spealigation. Moreover, to enhance students understanding of the applications and to have their research skills, the curriculum also entails completion of project work and assignment. The course structure is developed in such a way that the academic is blended with applied writing and creative thinking and encourages seminar, presentations practical exposure etc.

SOCIOLOGY

Programme Specific Outcomes (PSOs)

Sociology is a discipline which seeks to understand all aspects of human social behaviour including the behaviour of individuals as well as the social dynamics of small groups, large organizations, communities, institutions and entire society. Sociologists are typically motivated both by desire to better understand the principles of social life and by the conviction that understanding these principles may aid in the formulations of enlightened and effective social policy. Sociology as a subject provides an intellectual background for students considering carriers in the professions or business.

STATISTICS

Programme Specific Outcomes (PSOs)

The Undergraduate (UG) Honours course in statistics aims to provide students with a more advanced and comprehensive understanding of statistical concepts, methods, and applications than a regular UG course. The outcomes generally include deeper coverage of topics such as mathematical statistics, Bayesian statistics, multivariate analysis, time series analysis, and demography. Students are expected to develop their ability to critically evaluate and apply statistical methods to complex real-world problems and to effectively communicate their findings. The goal of an Honours (UG) course in statistics is to prepare students for further studies in statistics or related fields, or for careers in industries that require advanced statistical skills.

ZOOLOGY

Programme Specific Outcomes (PSOs)

Students enrolled in B.Sc. (Honours) degree program in Zoology will study and acquire complete knowledge of disciplinary as well as allied biological sciences.

PSO1: At the end of graduation, they are likely to possess expertise which will provide them competitive advantage in pursuing higher studies from India or abroad; and seek jobs in academia, research or industries. Students will be able to define and explain major concepts in the biological sciences. They are able to correctly use biological instrumentation and proper laboratory techniques.

PSO2: Students will be able to communicate biological knowledge in oral and written form. Students will be able to identify the relationship or synchronization between structure and function at all levels: molecular, cellular, and organismal. Students should be able to identify, classify and differentiate diverse chordates and non-chordates based on their morphological, anatomical and systemic organization.

PSO3: They will also be able to describe economic, ecological and medical significance of various animals in human life. This will create a curiosity and awareness among them to explore the animal diversity and take up wild life photography or wild life exploration as a career option. The procedural knowledge about identifying and classifying animals will provide students professional advantages in teaching, research and taxonomist jobs in various government organizations; including Zoological Survey of India and National Parks/Sanctuaries.

PSO4: Students will be able to apply the scientific method to questions in biology by formulating testable hypotheses, gathering data that address these hypotheses, and analyzing those data to assess the degree to which their scientific work supports their hypotheses. Students will be able to present scientific hypotheses and data both orally and in writing in the formats that are used by practicing scientists. Students will be able to access the primary literature, identify relevant works for a particular topic, and evaluate the scientific content of these works. Acquired practical skills in biotechnology,

biostatistics, bioinformatics and molecular biology can be used to pursue career as a scientist in drug development industry in India or abroad.

PSO5: The students will be acquiring basic experimental skills in various techniques in the fields of genetics; molecular biology; biotechnology; qualitative and quantitative microscopy; enzymology and analytical biochemistry. These methodologies will provide an extra edge to our students, who wish to undertake higher studies. Students will be able to use the evidence of comparative biology to explain how the theory of evolution offers the only scientific explanation for the unity and diversity of life on earth.

PSO6: They will be able to use specific examples to explicate how descent with modification has shaped animal morphology, physiology, life history, and behaviour. Students will be able to explain how organisms function at the level of the gene, genome, cell, tissue, organ and organ-system. Drawing upon this knowledge, they will be able to give specific examples of the physiological adaptations, development, reproduction and behaviour of different forms of life. Students will be able to explicate the ecological interconnectedness of life on earth by tracing energy and nutrient flows through the environment.

PSO7: They will be able to relate the physical features of the environment to the structure of populations, communities, and ecosystems. Students undertaking skill enhancement courses like aquaculture, sericulture and apiculture will inculcate skills involved in rearing fish, bees and silk moth which would help them in starting their own ventures and generating self-employment making them successful entrepreneurs. Acquired skills in diagnostic testing, haematology, histopathology, staining procedures etc. used in clinical and research laboratories will provide them opportunity to work in diagnostic or research laboratory.

PSO8: Candidates find opportunities in government departments, environmental agencies, universities, colleges, biotechnological, pharmaceutical, environmental/ecological fields. There are numerous career opportunities for candidates completing their B.Sc., M. Sc and Ph.D. in Zoology in public and private sector.

PSO9: Candidates may find jobs as Animal Behaviourist, Conservationist, Wildlife Biologist, Zoological Curator, Wildlife Educator, Zoology faculty, Forensic Science experts, Lab technicians, Veterinarians etc.

BENGALI			
SEMESTER	**COURSE CODE**	**COURSE TITLE**	**COURSE OUTCOME (CO)**
1st	CC1	History of Bengali literature	Studying history of Bengali literature help students to know about contemporary issues in society, culture and development of the Bengali literature through prose, poetry, drama, short story and novel, Our vision is to help the pupils understand various structures of concepts, transformation of content, form and style of writing, pattern and technique through ages and indication of future direction in literature.
	CC2	Padavali literature	Selected verses from Vaishnav Padavali, Shakta Padavali, Chandi Mangal authored by mukundo Chakraborty. The above-mentioned text provides students the overall pattern and significance of Bengali language and literature of the medieval period
2nd	CC3	Forms and style of literature	After completion of the course the students will be able to: Discuss about the form of Bengali poetry and drama and variety of EPIC and lyrical ballads. Describe Bengali essays and its form and variety and its development within its immense focus of poetics.
	CC4	Linguistics	Different styles and techniques of Bengali language and grammar -linguistics and phonology, functional grammar Bengali dialect, their classification and chronological changes, evolution and morphological study of the Bengali language.

3rd	CC5	Bengali poetry	This course includes trans- narration of Ramayana by krittibas(adikanda), Sarada mangal by Bihari Lal Chakraborty, kavyasanchayan by Satyendra Nath, Anandamangal by Bharatchandra. Through these lucid poetry students will be exposed to the basic values and ethics like victory of good over evil they will also get a detail knowledge about the socio -culture and religious scenario of the then Bengali.
	CC6	Bengali essays	After completion of the course the students will be able to: Discuss about the author of the Bengali essays and its development. Accesses the authors of modern essays and its richest style and form.
	CC7	History of Bengali theatre and Bengali drama	After completion of the course that students will be able to: evaluate the influence of early Bengali drama and theatre in civil society. Explain the development of Bengali drama and new thoughts between early and modern drama.
	SEC-1	Project writing	Interest in research will through project writing and presentation of project papers.

4th	CC8	Bengali novel	After completion of the course the students will be able to: Describe about Bankim Chandra Chattopadhyay, Rabindranath Tagore, Sarat Chandra Chattopadhyay and Tara Shankar Bandopadhyay's novel: its success, beauty and "Ros"feelings in the readers heart.
	CC9	Reading of short stories by four selected authors	After completion of the course the students will be able to: Describe about four selected authors short story: it's beauty, style, success and its evergreen influence in society and human life.
	CC10	Tripura poetic literature and modern Bengali poetry	The students enjoy the flavour of the different types of poems written by various poets in 19th and 20th century. From the first unit of this course, student can learn about Tripura's poetic literature by reading Tripura poet Birchandra Debbarman's poetry book Srisri Jhulan and from this book they gain knowledge about the life of that time.
	SEC-2	Written skill	This course introduces the student to creative writing, story writing and article writing.

5th	CC11	Folk culture and folk literature	This course imparts a good knowledge of folklore, folk culture and a general overview of contemporary folk culture and history that would help students secure a broarder horizon of depth understanding to qualify for various competitive exams in law ,multimedia, civil service and other disciplines.
	CC12	Bengali novel (selected) and short story (selected)	After completion of the course the students will be able to: Describe about Sarat Chandra Chattopadhyay, Manik Bandopadhyay and Ashapurna Devi novel: it's beauty, style ,success and its evergreen influence in society and human life. They will be introduced with the feministic approach of literature. Describe short story of Rajshekhar Basu, Ashapurna Devi, Premendra Mitra and reflection of social life, its success and style. Discuss about the variety of Pre-independence and post- independence short stories written in Bengali its multi-dimensional aspect in human and social life.
	DSE-1	History of Bengali literature till 1800AD,19th Century and 20th century	By studying the ancient and medieval history of Bengali literature, students will learn about the origin and evaluation Bengali literature. Student will find out about the history, language, society and culture at that time. Student of Bengali can learn a beautiful description of what vows are observed by Bengali women wishing for the well -being of the family by reading this course.
	DSE-2	History of drama movement (1876 to 1990), poetic beauty and dramatization	By reading this course, students can get an idea about the history of Bengali drama movement and from the two units of this course, students can learn how to judge the poetic beauty of that poem by reading poetry and also learn how to judge dramatury by reading plays.

6th	CC13	Rabindra sahitya	Student will know the social impact of drama and theatre in Bengali literature. Students will know about the history of Bengali novel. Student will know the various types of novels and their characteristics. Students will learn about the origin of short story.
	CC14	History of Sanskrit, English and Hindi literature	This course helps in learning about the evaluation of literature in other Indian languages that have had a profound influence on the socio -culture formation in India since early Times and have also enriched Bengali language and literature. In this course students gain knowledge about *Comprehensive knowledge of comparative analysis of the Sanskrit literature, along with English literature and main cultural trends. * The history of Hindi literature would help to access a proper perspective from different views and socio- political aspects
	DSE-3	Biography and literary works	Through this course, the students will be helped to develop themselves as a good citizen in the future by reading biographies and poems, plays, novels, short stories of different authors. As a student develop character through studying biographical literature, he also gets moral education

	DSE-4	prosody and Rhetoric	The course is an organised methodology for achieving a knowledge of how to interpret poems, concepts of rhetoric and prosody. It discusses verses and early songs, the history of the evalution of lyrical poetry ,ballads and experiments with different genres .The course makes students aware about Indian idea of a rhetoric and prosody, practical learning and importance of rhetoric and prosody while studying poetry.	

BOTANY

SEMESTER	COURSE CODE	COURSE NAME	COURSE OUTCOME(CO)
1st	CC1	Phycology and Microbiology	**On completion of the course, students will be able to:** **CO1.** Understand the diversity among Bacteria, Viruses and Algae. **CO2.** Know their morphology, systematics and biology. **CO3.** Understand their life cycle patterns. **CO4.** Understand their economic importance.
	CC2	Biomolecules and cell biology	**On completion of the course, students will be able to:** **CO1.**Understand the different types of biomolecules and its importance. **CO2.** Realize the industrial application of Biochemistry.
2nd	CC3	Mycology and Phytopathology	**On completion of the course, students will be able to:** **CO1.** Understand the biodiversity of Fungi, lichens and plant pathogens. **CO2.** Know the economic importance of fungi, lichens and plant pathogens. **CO3.** Understand the scope and importance of Plant Pathology.

	CC4	Archegoniate	**On completion of the course, students will be able to:** **CO1**. Know the salient features of Cryptogams plants. **CO2**. Know the status of cryptogams as a group in plant kingdom. **CO3.** Understand the life cycles of selected genera. **CO4.** Learn about the economic and ecological importance.
3rd	CC5	Anatomy of angiosperms	**On completion of the course, students will be able to:** **CO1**.Understand the scope & importance of Anatomy. Know various types of tissue systems. **CO2.** Understand normal and anomalous secondary growth in plants. **CO3.** Describe various tissue systems in plants like epidermal, mechanical and vascular. **CO4.** Interpret the Principles involved in distribution of mechanical tissues. **CO5**. Explain the process of normal and abnormal secondary growth in plants. **CO6.** Differentiate between normal and abnormal secondary growth.
	CC6	Economic botany	**On completion of the course, students will be able to:** **CO1**.Understand the role plants in human welfare. **CO2.** Gain knowledge about various plants of economic use. **CO3.** Know importance of plants & plant products **CO4.** Understand the chemical contents of the plant products. **CO5.** Know about the utility of plant resources.

3rd	CC7	Genetics	**On completion of the course, students will be able to:** **CO1.** Students will understand the genetic terminology of genetics and laws of Mendelism. **CO2.** Students will understand and solve the various example of interaction of genes and multiple alleles. **CO3**. Students will able to construction of linkage map by test cross. **CO4**. Student gets idea and easily differentiates various types of inheritance and structural changes in chromosome. **CO5**. Understanding the concept, Evidences of Evolution and population genetics.
	SEC-1	Biofertilizer, Herbal technology, nursery and gardening	**On completion of the course, students are able to:** **CO1**. Understand the importance of horticulture in human welfare. **CO2**. Understand the propagation and cultural practices of useful vegetable, fruit and garden plants. **CO3**. Understand the impact of modern technologies in biology on horticultural plants. **CO4**. Understand the basic concepts of landscaping and garden designing. **CO5.** Inculcate interest in landscaping, gardening and flower and fruit culture. **CO6.**The students will learn about how to prepare suitable soil media for potting up, seedling and cutting.

			CO7. Be able to impart the skills like germinating seed and transplant seedlings and cutting into pots. **CO8.** Understand the entrepreneurial skills in nursery technology.
			CO9. Learn the characteristics, identification, cultural methods and maintenance ofè *Azospirillum*, *Azotobacte*r, *Azolla* and Anabaena. Know about *Mycorrhiza* – VAM association, types, occurrence, collection, isolation andè inoculum production. **CO10.** Studied the method of large scale production of biofertilizerè & Organic farming
4th	CC8	Molecular biology	**On completion of the course, students are able to:** **CO1.** Define terminologies related to cell and molecular biology. **CO2.** Identify localization and describe all cell organelles. **CO3.** Discuss the dynamics of plant cell structure and function. **CO4.** Describe Nucleus and chromosomes. **CO5.** Describe DNA replication, Transcription and Translation. **CO6.** Explain the concepts as well as mechanisms of damage and repair. **CO7.** Explain gene action and regulation (concept of operon, its structure and regulation). **CO8.** Interpret the genomic organization and its role in gene expression. **CO9.** Explain the concepts in molecular biology.

4th	CC9	Plant ecology and phytogeography	**On completion of the course, students will be able to:** **CO1**.Understand plant communities and ecological adaptations in plants. **CO2**.Learn about biodiversity and its conservation **CO3.** Study botanical regions of India and different vegetation types. **CO4.** Understand bioremediation, global warming and climate change. **CO5**. Students will know how the vegetation pattern changes in different ecosystem. **CO6.** Students will learn the techniques of vegetation studies and its application.
	CC10	Plant systematics	**On completion of the course, students will be able to:** **CO1**.Understand the status of angiosperms in plant kingdom. **CO2**.Realize the origin of angiosperms. **CO3**.Study various systems of classification. **CO4**.Understand various angiosperm families emphasizing their morphology, distinctive features and biology. **CO5**.Know their economic importance.
	SEC-2	Floriculture, medicinal botany, plant biodiversity, ethnobotany, mushroom culture technology	**On completion of the course, students are able to:** **CO1.** Students will understand the importance of Horticulture and Horticulture zones. **CO2.** Students will understand branches of Horticulture on the basis of uses, climatic condition, and life cycle pattern of plants.

			CO3. Students will learn techniques of artificial and natural propagation. **CO4.** Student gets idea about various treatments for changing flowering season according demand in the market. **CO5.** To give information about types of gardens and floriculture technology. **CO6.** The students will acquire sufficient academic and practical experiences and become self employed in the mushroom and nursery ventures. **CO7.** students will understand the basic information on mushroom, **CO8.** Be empowered with entrepreneurial skills through the production and disease management of mushrooms. **CO9.** Be able to discuss patterns of cultural evolution with plants.
5^{th}	CC11	Reproductive biology	**On completion of the course, students are able to:** **CO1**.Learn about double fertilization and their significance. **CO2**.Know about the Structure and development of dicot and monocot embryos.è **CO3**.Knowledge of the microsporangium, megasporangium, female **CO4**.gametophyte, male gametophyte, fertilization, endosperm, embryo, fertilization and seed formation; practical application of experimental embryology. **CO5**. The structure of Stamen, Pistil, Ovule, Embryo Sac, Pollination types.

5th			**CO6.** Double fertilization, formation of seed, deed dormancy and strategies of seed disease cell. **CO7**.Understand microsporogenesis and megasporogenesis and development of male and female gametophytes. **CO8**.Know the process of fertilization, endosperm and embryogeny. **CO9**.Understand structure and development of plant reproductive organs. **CO10.** Know about the Structure and development of dicot and monocot embryos.
	CC12	Plant physiology	**On completion of the course, students will be able to:** **CO1**. Define the terminologies: Plant water relations, Growth, Transpiration, Ascent of Sap, Plant growth regulators and Nitrogen metabolism. **CO2**. Explain processes of mineral nutrition, absorption of water, ascent of sap, mechanisms of water loss from plants. **CO3**. Demonstrate processes imbibition, Osmosis, Diffusion and Plasmolysis, measure growth by arc auxanometer, Bose Cresco graph. **CO4**. Describe Plant growth regulators and their types and Discuss nitrogen metabolism in plants **CO5**. Explain mechanisms and application of photoperiodism, vernalisation and classify the plants based on Photoperiodism.

5th	DSE-1	Industrial and environmental microbiology	**On completion of the course, students are able to:** **CO1.** Describe the central roles of microorganisms in nature, and the importance of microorganisms in industries and food preservation. **CO2.** Apply the microbiological knowledge to evaluate and judge the effects of other physical or chemical processes on the microbial status and the quality of products. **CO3.** On successfully completing the module, students will be able to demonstrate a knowledge and understanding of: antibiotics types, range and production of different types of antibiotics. **CO4.** Understanding of immune system and development and production of various kinds of vaccines, vitamins and proteins. **CO5.** Describe the fermentation process.
	DSE-2	Horticultural practices and post-harvest technology	**On completion of the course, students are able to:** **CO1**. Students will understand the importance of Horticulture and Horticulture zones. **CO2**. Students will understand branches of Horticulture on the basis of uses, climatic condition, and life cycle pattern of plants. **CO3**. Students will learn techniques of artificial and natural propagation. **CO4.** Post-harvest technology can improve the quality and shelf life of agricultural products.

			CO5. Post-harvest technology can help to reduce the wastage of agricultural produce. **CO6.** Post-harvest technology can help to improve the economics of agriculture.
6th	CC13	Plant metabolism	**On completion of the course, students are able to:** **CO1**.Identify the physiological responses of plants. **CO2.** Analyze the role of external factors in controlling the physiology of plants. **CO3.** Explain the metabolic processes taking place in each cell. **CO4.** Appreciate the energy fixing and energy releasing processes taking place in cells. **CO5.** Students will be able to understand the various physiological life processes in plants **CO6.** They will also gain about the various uptake and transport mechanisms in plants and are able to coordinate the various processes. **CO7.**They understands the role of various hormones, signalling compounds, thermodynamics and enzyme kinetics. **CO8.**During the course students will gain knowledge about various mechanisms such as channel or transport proteins involved in nutrient uptake in plants. **CO9.** Understand the process of Photosynthesis, Respiration and Nitrogen metabolism.

6th	CC14	Plant biotechnology	**On completion of the course, students will be able to:** **CO1**. Define the terminologies related to plant biotechnology. **CO2**. Explain enzyme technology and their industrial scale production. **CO3**. Interpret the production of Single cell proteins. **CO4**. Illustrate the concept of phytoremediation. **CO5**. Describe General method of gene isolation from the plants and their application. **CO6**. Explain Methods of gene, transfer in plants. **CO7**. Illustrate Application of plant genetic engineering and Nano-biotechnology in crop improvement. **CO8**.Understand the micropropagation methods and hands on experience to students. **CO9**. Learn about the basic concept of somatic embryogenesis.
	DSE-3	Plant breeding	**On completion of the course, students are able to:** **CO1**. Understand the methods of crop improvement. **CO2**. Understand the importance of horticulture in human welfare. **CO3**. Develop skill in gardening technique among students. **CO4.**The students will understand the fundamental aspects of plant breeding and plant pathology involving the principles, achievements, few diseases and their casual agents.

	DSE-4	Natural resource management	**On completion of the course, students are able to:** **CO1**.They understands the pattern origin, diversification and cultivation of plants in nature. **CO2**. They are able to design the strategies for conservation of these natural resources. **CO3**. They become well worst with the role and functions of various organizations. **CO4**. They will understand the factors leading to Environmental degradation, their reasons and their impact on the Environment. **CO5**. This knowledge can help to form strategies for conservation and sustainable management under the given legislative measures.

CHEMISTRY

SEMESTER	COURSE CODE	COURSE TITLE	COURSE OUTCOME
1ST	CC1	Inorganic Chemistry-I	After completion of the course, students should be able to: **CO 1:** Learn the basic and advanced theories of atomic structure along with their applications **CO 2:** Understand the periodicity of the elements **CO 3:** Learn chemical bonding with a modern approach **CO 4:** Know the concept and applications of oxidation and reduction **CO 5:** Learn the experimental techniques of titrimetric analysis and acid-base titrations in laboratory **CO 6:** Estimate the iron solution by oxidation-reduction titrimetry in laboratory
	CC2	Physical Chemistry-I	After completion of the course, students should be able to: **CO 1:** Learn kinetic molecular model of a gas and behaviour of real gases **CO 2:** Know the physical properties, structures and application of liquids **CO 3:** Understand electrolysis and electrolytic conductance and their applications **CO 4:** Learn the structures and properties of solids **CO 5:** Determine the surface tension, viscosity, cell constant and conductance of electrolytes

			experimentally
2ND	CC3	Organic Chemistry-I	The course enable the students: **CO 1:** To understand the basic theories of organic reaction mechanism **CO 2:** To explore the fundamental aspects of world of stereochemistry **CO 3:** To know the important reaction mechanism of aliphatic hydrocarbons **CO 4:** To know how to do conformational analysis in both cyclic and acyclic systems **CO 5:** To familiar with the properties and reactions of aromatic hydrocarbon **CO 6:** To learn the experimental method for the determination of melting point, boiling point **CO 7:** To learn practically how to do paper and thin layer chromatography.
	CC4	Physical Chemistry-II	The course helps the students: **CO 1:** To learn the basic concept of chemical thermodynamics which include the first law, second law and third law of thermodynamics **CO 2:** To know the details of thermochemistry **CO 3:** To understand the advance course of chemical equilibrium **CO 4:** To know about the solutions and colligative properties **CO 5:** To learn the experimental methods for the determination of heat capacity and enthalpy in

			laboratory
3rd	CC5	Inorganic Chemistry-II	The course enable the students: **CO 1:** To understand the general principle of metallurgy **CO 2:** To know the theories of acids and bases and their application in chemical science **CO 3:** To explore the chemistry of *s* and *p* block elements **CO 4:** To learn the preparation, properties, structure and uses of some compounds of p-block elements **CO 5:** To learn the properties, structures and reactions of noble gases **CO 6:** To familiar with the properties, synthesis and applications of inorganic polymers **CO 7:** To learn how to do iodometric titrations experimentally **CO 8:** To become expertise in inorganic preparations experimentally
	CC6	Organic Chemistry-II	The course enable the students: **CO 1:** To learn the chemistry of alkyl and aryl halides **CO 2:** To know the synthetic uses of organo-magnesium and organ-olithium compounds **CO 3:** To understand the chemistry of alcohols, phenols, ethers and epoxides **CO 4:** To learn the chemistry of carbonyl compounds and the use of reagents and name reactions associated with them **CO 5:** To learn the properties, synthesis and reactions of carboxylic acid

			CO 6: To familiar with the synthetic uses of active methylene compounds **CO 7:** To learn the chemistry of organo-sulfur compounds **CO 8:** To learn the methods of preparation of variety classes of organic compounds experimentally
	CC7	Physical Chemistry-III	The course helps the students: **CO 1:** To understand the concept of phase equilibria **CO 2:** To learn the theories of chemical kinetics **CO 3:** To explore the world of catalysis and surface chemistry **CO 4:** To learn the experimental methods for construction of phase diagram and critical solution temperature **CO 5:** To learn how to execute reaction kinetics experiments in laboratory **CO 6:** To familiar with the experiment based on adsorption theory
4th	CC8	Inorganic Chemistry-III	After completion of the course, students should be able to: **CO 1:** Learn the basic and advanced level of coordination chemistry with special reference to nomenclature, structure, colour and magnetic properties **CO 2:** Know detailed physical and chemical properties of transition elements, lanthanoids and actinoids **CO 3:** Understand the concept, theories and applications of bioinorganic chemistry

			CO 4: Learn the experimental methods of gravimetric analysis of nickel, iron, copper and aluminium **CO 5:** Learn the experimental methods for the preparation of inorganic compounds **CO 6:** Know the technique of separation of metal ion by paper chromatography
4th	CC9	Organic Chemistry-III	The course enable the students: **CO 1:** To understand the preparation, reactions and synthetic application of nitrogen containing functional groups **CO 2:** To know the chemistry of naphthalene, anthracene and phenanthrene **CO 3:** To learn the nomenclature, structure, synthesis and reactivity of some five and six membered heterocyclic compounds **CO 4:** To learn the isolation, structure elucidation and synthesis of some alkaloids and terpenoids **CO 5:** To know the experimental process of qualitative analysis of unknown organic compound in laboratory
	CC10	Physical Chemistry-IV	The course helps the students: **CO 1:** To understand the basic and advanced theories of electrochemistry **CO 2:** To know the theories of electrical and magnetic properties of atoms and molecules and their application thereof **CO 3:** To learn conductometric titration experimentally **CO 4:** To learn potentiometric titration

			experimentally
5th	CC11	Organic Chemistry-IV	The course enable the students: **CO 1:** To learn the nomenclature, classification, physical properties, synthesis and reactions of amino acids and peptides **CO 2:** To know the structures synthesis and reactions of nucleic acids **CO 3:** To understand the classification and characteristics of enzyme along with enzyme action and inhibition **CO 4:** To learn the basic concept of lipids **CO 5:** To develop the concept of energy in biosystems **CO 6:** To know the classification, structure, synthesis and therapeutic uses of some important pharmaceutical compounds **CO 7:** To familiar with the methods of estimation of amino acid and protein experimentally **CO 6:** To know how to determine saponification value and iodine number of oil and fat experimentally
	CC12	Physical Chemistry-V	The course enable the students: **CO 1:** To introduce themselves with the concept of quantum chemistry in elaborate manner **CO 2:** To learn molecular spectroscopy such as rotational, vibrational, electronic and Raman spectroscopy **CO 3:** To understand nuclear magnetic resonance and electron spin resonance spectroscopy **CO 4:** To learn the photochemistry **CO 5:** To study UV/visible spectroscopy of selected organic and inorganic compounds by

			spectrophotometer **CO 7:** To familiar with method of estimation of amino acid and protein experimentally **CO 6:** To learn the application of colourimetry methods experimentally
5th	DSE-I	Analytical Methods in Chemistry	The course enable the students: **CO 1:** To know the statistical treatment of analytical data analysis **CO 2:** To learn optical methods of analysis which include UV/Visible spectrometry, infrared spectrometry and emission spectrometry **CO 3:** To learn thermal methods of analysis and electroanalytical methods **CO 4:** To understand the separation techniques which include solvent extraction methods, different types of chromatography **CO 5:** To know how to do stereoisomeric separation and analysis **CO 6:** To familiar with the paper chromatographic separation of metal ions and monosaccharides experimentally **CO 7:** To learn the thin layer chromatography technique to separate the active ingredients of plants, flowers and juices **CO 8:** To learn solvent extraction methods experimentally **CO 9:** To know how to do analysis of soil experimentally
	DSE-II	Research Methodology for Chemistry	The course enable the students: **CO 1:** To learn how to do literature survey

			which include print sources, digital sources and information technology and library resources **CO 2:** To learn the methods of scientific research and writing scientific papers **CO 3:** To know the idea of chemical safety and ethical handling of chemicals **CO 4:** To learn the data analysis methods **CO 5:** To understand the basic electronic circuits used in analytical instruments
6th	CC13	Inorganic Chemistry-IV	The course helps the students: **CO 1:** To learn the basic principle involved in the analysis of cations and anions in inorganic qualitative analysis **CO 2:** To learn the basic and advanced level chemistry of organometallic compounds which include preparation, properties, structure, reactivity and bonding of metal carbonyls, Ziese's salt and ferrocene **CO 3:** To know the structure, bonding and properties of metal alkyls **CO 4:** To study industrial processes catalysed by organometallic compounds **CO 5:** To learn the reaction mechanism and kinetics involved in inorganic complexes **CO 6:** To do the qualitative semimicro analysis of inorganic mixtures containing 3 anions and 3 cations in laboratory

	CC14	Organic Chemistry-IV	The course helps the students: **CO 1:** To learn organic spectroscopy which include UV spectroscopy, IR spectroscopy and NMR spectroscopy **CO 2:** To know the classification, synthesis and application of dyes **CO 3:** To learn the chemistry of carbohydrates in details **CO 4:** To study the chemistry and applications of organic polymers **CO 5:** To know how to prepare selected polymer and dye in laboratory **CO 6:** To do the qualitative analysis of unknown organic compounds in laboratory
6th	DSE-III	Inorganic Materials of Industrial Importance	The course enable the students: **CO 1:** To know the classification, properties, industrial manufacturing methods and application of glass, ceramics and cement **CO 2:** To learn the manufacturing process of different categories of fertilizers **CO 3:** To understand the chemistry of surface coatings **CO 4:** To learn the classification, composition and manufacturing processes of important alloys **CO 5:** To study the theories and industrial applications of catalysis **CO 7:** To familiar with the basics of chemical explosives and their industrial preparations **CO 6:** To learn how to analyse and estimate the various

			chemicals present in fertilizers, alloys and cement experimentally
‘ 6th	DSE-IV	Industrial Chemicals and Environment	The course helps the students: **CO 1:** To learn the manufacturing process, application, analysis and hazards of selected industrial gases and inorganic chemicals **CO 2:** To learn the industrial metallurgy with special reference to ferrous and nonferrous metals **CO 3:** To know the ecosystem, air pollution and air pollutant **CO 4:** To know water pollution and water pollutant **CO 5:** To study the sources of energy and nuclear pollution **CO 6:** To know the importance of biocatalysis in Green chemistry and chemical industry **CO 7:** To determine the dissolved oxygen, chemical oxygen demand, biological oxygen demand, percentage of available chlorine in laboratory **CO 8:** To learn how to analyse water sample in laboratory by chemical method

COMMERCE			
SEMESTER	**COURSE CODE**	**COURSE TITLE**	**COURSE OUTCOME(CO)**
1st	CC1	BCH 1.2: Financial Accounting	Students are aware of about the preparation of all kinds of financial accounts and records of business firm
	CC2	BCH 1.3: Business Management	In this subject student are given proper guidelines regarding the primary concept of management of business activities
2nd	CC3	BCH 2.2: Business Law	Students are aware of about the available rules and regulations regarding business firm operation
	CC4	BCH 2.3: Cost Accounting	Students are aware about the preparation of different cost accounts and records in the business operation
3rd	CC5	BCH 3.2: Auditing	In this subject student are given primary knowledge about the verification of books of accounts and records of the business activities
	CC6	BCH: Direct Tax: Law and Practice	Students are aware about the implications of different direct tax laws under Income Tax Act. 1961
	CC7	BCH 3.4: Corporate Law	Students are aware of about the available rules and regulation regarding company/ corporate business operation
	SEC-1	BCH/ BC 3.1: E-Commerce	Students are aware of about the process and procedure of online business transactions and its functions and operations
4th	CC8	BCH 4.2: Business Mathematics	In this subject students are given primary knowledge about the applied mathematics in business operations and transactions
	CC9	BCH 4.3: Human Resource Management	Students are aware of about the processes and procedures of proper utilization of human resources in business activities

	CC10	BCH 4.4: Corporate Accounting	Students are aware of about the preparation of all kinds of financial accounts and records of company/ corporate sector
	SEC-2	BCH/ BC 4.1: Entrepreneurship	Students are aware of about the processes, procedures, needs and importance of entrepreneurship in modern business operation
5th	CC11	BCH 5.1: Management Accounting	Students are aware of about the preparation of various kinds of tools and techniques of accounting for the decision-making purpose of the business
	CC12	BCH 5.2: Fundamentals of Financial Management	Students are aware of about the tools and techniques of financial decision making for the management of the business
	DSE-1	Financial Markets, Institutions and Financial Services	In this subject students are given the concept and knowledge of Indian financial markets and financial institutions of the economy
	DSE-2	Indirect Tax: Law and Practice	Students are aware about the implications of different indirect tax laws i.e. GST, Customs Act. etc.
6th	CC13	BCH 6.1: Marketing Management	Students are aware of about the process and procedure of marketing and marketing activities of business organization
	CC14	BCH 6.2: Computer Application in Business	In this subject students are given primary knowledge about the uses of computer in business operation and its application
	DSE-3	BCH/ BC 6.3 & 6.6: Banking and Insurance	In this subject students are given the concept and knowledge of banking and insurance sector of Indian economy
	DSE-4	BCH/ BC 6.3 & 6.6: Fundamentals of Micro, Small and Medium Enterprises (MSME)	Students are aware of about the needs, importance, processes and procedures of MSME sector in modern business operation of India

ECONOMICS			
SEMESTER	**COURSE CODE**	**COURSE TITLE**	**COURSE OUTCOME (CO)**
1st	CC1	Principles of Micro Economics I	In this course students will understand the basic idea of Micro economic theory. They will get the basic idea about: · The subject matter of economics; working of the market demand-supply and market adjustments. · Utility analysis; income effect-substitution effect; Giffen Paradox · Production behavior of the firm. · Cost and revenue analysis of the firm
	CC2	Mathematical Economics I	In this course students will get the basic idea about: · Higher algebra · Introductory differential calculus · Integration and simple applications · Difference and differential equations, concepts of discount rate and its simple applications
2nd	CC3	Principles of Macro Economics I	In this course students will get the basic idea about: · National Income analysis · Theory of consumption · Theory of investment · Savings, effective demand and simple Keynesian Model: introduction of international trade

	CC4	Statistics for Economics I	In this course students will get the basic idea about: · Collection and presentation of data · Measures of central tendency · Measures of dispersion · Moments, skewness and kurtosis- problems an solutions
3rd	CC5	Monetary Economics	In this course students will get the basic idea about: · Value and supply of Money · Demand for money · Commercial and central banking · Money and capital markets- structure, objectiv and importance
	CC6	Development Economics I	In this course students will get the basic idea about: · Basic elements and indices of economic growt and economic development · Stages of growth and labor surplus economy · Poverty, inequality and development · Different growth models
	CC7	Mathematical Economics II	In this course students will get the basic idea about: · Production functions · Simple mathematical problems on proce, income and cross elasticities of demand · Unconstraint optimization technique · Constraint optimization technique, primal to dual: budget and cost minimization

4th	CC8	Principles of Micro economics II	In this course students will get the basic idea about: · Derivation of price demand curve, income demand curve, revealed preference theory-derivatio of demand curve · Market morphology- perfect competition, Monopoly, Monopolistic competition and oligopoly · Analysis of factor market- Recardian Rent and modern rent; Keynesian liquidity preference theory rent; risk and uncertainty theory of profits; wage determination.
	CC9	Development Economics II	In this course students will get the basic idea about: · Trade and economic development · International financial agencies-World Bank, World Trade Organization, Globalization and economic development · Sustainable development- its indicators, environmental accounting, poverty and environment
	CC10	Statistics for Economics II	In this course students will get the basic idea about: · Correlation analysis- simple problems and solutions · Regression analysis- uses and limitations · Theory of probability-simple problems and solutions · Time series, index number, problems in construction and limitations of index numbers

5th	CC11	Macro Economics II	In this course students will get the basic idea about: · IS-LM Model, IS-LM model with Govt. Sector effectiveness of fiscal and monetary policies · Laissez Faire Principle, Say's Law of Market, Classical Dichotomy · Complete Keynesian Model, Derivation of Aggregate demand and Aggregate supply curves · Mundell-Fleming Model, its difference from IS LM Model
	CC12	Linear Economics and General Equilibrium	In this course students will get the basic idea about: · Formulation of a Linear Programming Problem and its solution · Basic Concepts of Game Theory · Input-Output Analysis, features, derivation of consumption possibility locus · Distinction between partial and general equilibria, existence, uniqueness and stability problems of equilibrium
	DSE-1	Welfare and Monetary Economics	In this course students will get the basic idea about: · Pareto Optimality- its concept, critical evolution of Pareto optimality · Welfare Maximization criteria · Theory of inflation- typology, causes and measures to control inflation · Trade cycle-its meaning, characteristics and phrases, Measures to control trade cycles

	DSE-2	Indian Economics I	In this course students will get the basic idea about: · Features of Indian Economy, problems of National income estimation in India and its solution trends and features in per capita income in post reform period · Structural changes in Agriculture and Industry · Education and Health scenario and its policy framework, energy resources and its crisis, role and function of RBI, recent reforms in banking and insurance sector in India · Feature of Indian Tax Structure- Role, problem and its remedies
6th	CC13	International Economics	In this course students will get the basic idea about: · Internal and International Trade, International Trade and Economic Development · Doctrines of International Trade: Absolute Cos Advantage, Comparative Cost Advantage, Heckscher- Ohlin Theory · Terms of Trade and Gains from Trade · Trade Barriers. Balance of Payment Problems- Causes and Corrective actions
	CC14	Public Economics	In this course students will get the basic idea about: · Nature and scope of public finance, importance of public finance in a modern economy · Sources and classification of public revenue, Taxation- its types, principles of taxation · Public debt- its sources, rationale, burden of internally and externally held public debts, debate o shifting of public debt to future generations, public debt management · Role of fiscal policy in a developing economy, difference between fiscal and monetary policies, public budget- its type and objectives

6th	DSE-3	Sampling and Basic Econometrics	In this course students will get the basic idea about: · Types of Sampling, expectation and standard error of sample mean and proportion · Testing of Hypotheses, F and t distributions · Two variables classical linear regression mode BLUE Properties · Violation of classical assumptions, Heteroscedasticity, Multicollinearity & Auto-Correlation: Meaning, Consequences, Tests and Remedies
	DSE-4	Indian Economics an Its History	In this course students will get the basic idea about: · Economic Reforms, assessment of planning in India, Planning to NIYI Aayog · Current Challenges in Post-Independent India-Poverty,Unemployment, Inflation-Its Trends, Cause impact and Govt. Policy to control · Indian Economic History- Economic Exploitation, Famines- Causes and consequences · Land tenure system in British India, Commercialization of Indian Agriculture, Deindustrialization- features, causes and effects; Indian Railways- History of its extension, economic concequences.

EDUCATION			
SEMESTER	**COURSE CODE**	**COURSE NAME**	**COURSE OUTCOME(CO)**
1st	**CC 1**	**Basics in Education**	Through this paper the students acquire the basic knowledge of Education i.e. the meaning, nature, scope, factors and functions of education etc. The students also understand the foundations of education, forms of education and human values related to education
			Furthermore, this paper also makes the students understand the relationship between philosophy and education, branches of philosophy and their educational implications , western schools of philosophy and their educational contribution etc.
	CC2	**Psychological foundation of education**	This paper enables the students to acquire the basic knowledge of psychology and its relationship with education. This paper makes them understand the various methods used in studying the personality, Intelligence etc of human beings.
			Furthermore it makes the students acquainted with the concept, factors and various theories of learning. The students also learn with the concept of personality, intelligence, Motivation etc and their related aspects.

2nd	**CC3**	**Sociological Foundation of Education**	This paper develops the knowledge and understanding of the students about sociology, its nature scope and other related aspects. It also helps the students to understand various socio - cultural aspects and related concepts.
			Furthermore, the paper also makes the students acquainted with social change, social stratification, social mobility, socialization etc. This paper also enhances the knowledge of recently incorporated concepts like globalization, liberalization and privatization.
	CC4	**Pedagogical Skills**	Through the four units given in this paper the students are able to develop the basic concepts of teaching, learning, instruction, aims and objectives of teaching, phases of teaching, levels of teaching, maxims of teaching etc.
			Furthermore this paper also makes the students understand the methods of teaching and learning, the roles teacher as facilitator, counsellor and researcher.
3rd	**CC5**	**Education in Pre-Independence India**	This paper intends to make the students aware of the development of Education in India since the Vedic period up to the Independence of India. Especially this paper highlights the history of evolution of Vedic, Buddhist, and Islamic education system of India.

			Through this paper the students are also acquainted with the contributions of western missionaries and the recommendations of various committees and commissions made for the development of pre-independence education in India.
	CC6	**Environmental and Population education**	This paper is taught to develop the students' knowledge and understanding regarding Environmental education, its related aspects, its importance in human life and its needs and consequences.
			This paper also intends to make the students aware of Population education, its needs, importance, causes of population growth the process of controlling it and the pedagogical aspects of population education in India.
	CC7	**Issues and Trends in Indian Education**	This paper highlights the recent uses and trends of modern Indian Education system, especially the Elementary Education system, Secondary Education system, Higher Education System running in India . The students are also made aware of the various agencies and organizations which are contributing to that system of Education.
			This paper further makes the students know and understand the recently developed like RTE 2009, Inclusive Education, Knowledge commission Report etc.

	SEC-1	**Guidance and Counselling**	This paper enables the students to develop the skills of preparing/writing assignments and projects on the various topics related to Guidance and counselling. The students are asked to write assignment/project on 75 marks and rest 25 marks are kept for oral interaction with them .
	CC8	**Development of Education in Independence India**	This paper enables the students to know and understand the process and development of Indian education after Independence. It makes the students aware of the reports of various committees and commissions formed for the development of Indian Education system after independence . It also makes the students understand the problems and issues of Secondary and Higher Education in Tripura. Further this course enhance the students ideas about Financing in Education, Teacher Education, Leadership in Education, Peace Education, Life Skills and role of education in National development.
	CC9	**Curriculum Development**	This core paper in Honours is to develop the students' knowledge and understanding of curriculum its types, components, principles, bases or foundation etc.

			It further makes the students understand the basic aspects of National Curriculum framework 2005, The process of Curriculum development and Curriculum Evaluation process.
	CC10	**Measurement, Evaluation and Assessment**	This paper enables the students to know and understand the concept, purpose, types of Measurement and Evaluation in Education. It also makes the students acquainted with various tools and techniques of Measurement and Evaluation.
			Further this paper also makes the students aware of the procedure of test construction, standardization and the various recently developed concepts used in Evaluation, like Cumulative Record Card, question Bank, Semester system, Grading system, Credit system etc.
	SEC-2		This paper also helps to develop the skills on writing, assignments/preparing projects on the History of Indian Education, recent trends and problems of Indian education etc. The students are asked to submit the project/Assignments of 75 marks and rest 25 marks are allotted for personal Interaction with them.
5th	**CC11**	**Educational Technology**	This paper enables the students to understand the meaning, nature, scope, purpose, components and types of educational technology and communication. It further makes the students know and understand the various modern tools and techniques of information and communication

			Technology used in Teaching learning process. It also enables the students to understand Micro teaching and Programmed learning along with their various aspects.
	CC12	**Thoughts and Practise of Great Educators**	This paper enables the students to understand the life, philosophy and educational contribution of great six Indian educators and Eight Western educators who are Raja Ram Mohan Roy, Iswar Chandra Vidyasagar, Swami Vivekananda, Rabindranath Tagore, Mahatma Gandhi, Sri Aurovinda, J.J Rousseau, J.H Pestalozzi, F.W. August Frobel, Madam Maria Montessori and Bertrand Russell.
	DSE-1	**Special Education**	This paper enables the students to acquire knowledge and understanding of the concept, types and History of exceptional children. It also helps them to understand the various provisions made for exceptional children in the National policy on Educational 1986 and Ram Murthy Committee report of 1991.
			This paper further helps to understand the concept, types, educational provisions etc in respect of gifted, creative, mentally retarded and learning disabled children.

	DSE-2	**Distance Education**	Through this paper the students are enabled to know and understand the concept, characteristics, needs, purpose, merits and demerits of Distance Education. This paper also highlights the history of distance education and various components of Distance Education like PCP, Assignments, Project and ICT Support etc.
			Furthermore this paper helps the students to understand the various forms of distance Education in India and the role of IGNOU as the largest Distance Education Institution in the world.
6th	**CC13**	**Educational Research**	This paper enables the students to understand the meaning, Nature, Scope, Purpose and Various types of Educational Research. It further makes the students understand the research process with its various aspects like Identification of Research problems, Review of related literature, Formulation of hypothesis, constants and variables, Sampling techniques, writing of a research Report etc.
	CC14	**Statistics in Education**	This paper intends to provide the knowledge of educational statistics, its nature, scope etc. It also helps to know the preparation of frequency distribution and graphical representation in forms like Bar graph, Pie- diagram, Polygon, Ogive etc.
			Further more this paper also enables the students to knowthe measure of dispersion and also the informal data Analysis by using NPC, standard scores, Z Score, T-Score, CR-Test(t-test) and Chi Square test.

	DSE-3	**Educational management, Planning and Administration**	This paper makes the students know and understand the concept, nature and scope of Educational management. Educational planning and Educational Administration.
			Furthermore this paper also helps the students to know and understand the needs , type, steps and strategies of Educational planning and Management etc.
			It also makes the student aware of Educational Administration its concept, objectives, scope, types, functions and its relation with educational management.
	DSE-4	**Mental Hygine**	This paper enables the students to understand the meaning, nature and scope of mental health and hygiene . Mental disorders etc . This paper also makes the students know and understand the concept, scope, needs, problems etc and understand the role of home and school in better adjustment of the children.
			Furthermore this paper also enables the students to know mal-adjustment its types, characteristics, identification process, role of parents and school in promoting mental health and hygine. This paper also deals with mental disorder and its therapeutic measures and various defence mechanism.

ENGLISH

SEMESTER	COURSE CODE	COURSE NAME	COURSE OUTCOME(CO)
1st	CC1	British Poetry and Drama: 14th to 16th Centuries and History of Language.	The course enables the students to learn: CO 1: History of English Literature from Old English period to 16th Century. CO 2: Poetry of 16 century with reference to Petrachan sonnet and Shakespearean sonnet. CO 3: Tragic drama of 16th century with reference to Marlowe's Dr. Faustus and Shakespeare's Macbeth. CO 4: Comic drama with reference to Ben Jonson's Everyman in his Humour and Shakespeare's As You Like It. CO 5: Origin of English Language and three major influences in English language which led to the growth of English language. CO 6: Importance of loan words in the growth of English language.
	CC2	British Poetry and Drama: 17th to 18th Centuries and History of Language	The students learn about: CO 1: History of English Literature of 17th and18th century, study the important features of the period, important writers of period and their contribution in literary field. CO 2: What is epic? Study John Milton and his greatest epic-Paradise Lost. CO 3: What is mock heroic epic? Gather knowledge about Alexander Pope and his work The Rape of the Lock. CO 4: What is anti-sentimental comedy? Study Oliver Goldsmith and his work She Stoops to Conquer. CO 5:Learn John Webster's The Duchess of Malfi. CO 6: Read formation of words in English, its texture, how the borrowing of words took place.

2nd	CC3	British Literature: 18th Century	The students in this paper grasp knowledge about: CO 1: Literary types like Drama, its types. Poetry and its types. Fiction. Under fiction they study novel and short story. CO 2: Master 18th century writers like Jonathan Swift and his work Gulliver's Travels. CO 3: Learn about Lawrence Sterne and his work. CO 4: Get to know about 18th century poets with reference to their works. CO 5: Learn to critically appreciate prose which will be out of syllabus.
	CC4	British Romantic Literature: 19th Century	The course helps the student to learn: CO 1: British Romantic Period ,its characteristics. CO2: learn 19th century essayist like Charles Lamb ,Mary Shelley. CO 3 Learn Jane Austen with reference to Pride and Prejudice. CO4 : study Romantic poets CO5 : practice unseen passage of a poem or prose critically.
	AECC2	*ENGLISH/MIL(KOKBORORK/BENGALI/ HINDI)	English Communication makes the students learn about: CO1: Types of communication – Verbal and Non-Verbal Communication and Barriers of Communication. CO2: Speaking Skill – Monologue and Situational Dialogue, Group Discussion, How to face interview. CO3: Close Reading of Text, Summary and Paraphrasing, Analysis and Interpretation. CO4: Basic tools for Writing Skill: Learn about Vocabulary, Question Tag, Determiners and preposition.

3rd	CC5	History and Specimens of British Literature (Victorian Period)	The study of this course enables the students to learn: CO 1:Historical and political background of the period, study the poets, novelists, dramatists of the period along with their contribution in the literary field. CO 2: Learn about Victorian poets and poems. CO 3:Learn about Victorian novelists with reference to David Copperfield and Mayor of Casterbridge, the reflection of the socio-political condition in their works.
	CC6	History and Specimens of British Literature(Late Victorian to British Literature)	Through the study of this paper the students come to know about: CO 1:The late Victorian period till the socio-political condition till 1940s. CO2: Study lateVictorian novelists with reference to D.H Lawrence and Virginia Woolf. CO 3: Victorian poets with reference to W.B Yeats, Wilfred Owen, T.S. Eliot, Macniece. CO 4: Learn what is problem plays, poetic drama with reference to Bernard Shaw and J.M Synge.
	CC7	Indian English Literature	The study of this course makes the students to gain knowledge about: CO 1: The study of Anglo-Indian Literature with reference to poets like Rabindranath Tagore,Toru Dutt, Nissim Ezekiel. CO2 : Gain knowledge about North East literature with reference Robin.S. Ngangon, and Temsula Ao. CO 3:Study Indian novelists with reference to Temsula Ao, Sri Aurobindo,Shashi Deshpande

			CO4: Learn Indian playwrights like Rabindranath Tagore, Mahesh Dattani.
	SEC-1	English Language Teaching	After studying English Learning Teaching the students come to learn: CO 1: Position of English in India. CO 2: Aims and objective of teaching English and the four skills of English Language. CO 3: Methods of teaching English language and literature like grammar, translation method and the direct method. CO 4: Aids and methods for language teaching with the help of text book, blackboard, flash card, dictionaries, non-print materials, and computer aided language learning. CO 5: Preparing Lesson Plans in Language Teaching.
4th	CC8	American Literature	The students come to know about: CO1 : History of American Literature. CO 2:Learn about American poets like Walt Whitman, Robert Frost, Emily Dickenson. CO2: Study American short stories. CO3: American Novel with reference to Ernest Hemingway. CO4American Drama with reference to Arthur Miller, concept of American Dream.
	CC9	Women's Writing	The Course enables the students to learn : CO1: What is Literary Theory? Study about Elaine Showalter and his feminist writing. CO2: Study Indian feminist writer Chandra Talpade Mohanty. CO3: Poems written by women British, American and Indian poets. CO4: learn novel of Alice Walker with reference The Color Purple. CO5: Study Indian women short story writers like Mahesweta Devi and Indira Goswami.

	CC10	Post Colonial Literature	The study of Post Colonial makes the students to learn about CO 1:Problems of and consequences of the decolonization of a country, especially questions relating to the political and cultural independence of formerly subjugated people and themes of racialism and colonialism with reference to novels, short stories and plays like The Bride Price, The Collector of Treasure, The Girl who Can, The Trial of Diden Kimathy. CO 2: Study about Post Colnonial literary theory that deals with literature produced in countries that were once or are now colonies of other countries.
	SEC-2	Creative Writing	Studying Creative Writing the students understands: CO 1: What is Creative writing and the art and craft of writing. CO 2: Modes of Creative writing . CO 3: How to write for media. CO 4: How to prepare for publication.
5th	CC11	Rhetoric, Prosody and Phonetics	The study of Rhetoric and Prosody enables the students to know: CO1: How to use the tools of rhetoric and one can improve his communication. The topic helps provides a comprehensive study of figure of speech which is necessary for a better understanding of the language and literature. CO2: Study of Prosody provides information beyond a sentence's literal word meaning. T he students learn rhythm, stree and intonation of speech. CO3: Phonetics helps the students to learn about pronunciation and decode new words as they read.
	CC12	Modern European Drama	Realism is the most significant and outstanding quality Modern English Drama . Students learn about : CO1: The works of this period pore over every day real world, domestic issues, realism, naturalism.

			CO2: The students learn various concept like Modernism, Realism, Existentialism, Epic theatre, Absurd theatre,Kitchen Sink drama, Poetic drama, Irish Dramatic movemet.
	DSE-1	Commonwealth Literature	Common Wealth Literature is the result of various types of migrations and cross cultural accidents.The students in this paper learn about: CO1: The novel, drama, poem and short stories records the process that changed the life and status of the natives . CO2: The writers emphasised the need to promote tolerance, respect, which are essential to the development of free and democratic societies.
	DSE-2	Partition Literature	The study of Partition literature enables the students to learn about : CO1 : The poetry and drama brings into limelight the plurality of human experiences due to partition of India. CO2: The study of novel and drama makes the students to learn about the arbitrariness of a nation and explores in depth issues of class, gender, religion and meaning of existence during the partition .
6th	CC13	Linguistics	Linguistics can offer to study scientific study of language. It helps to increase our knowledge of language. CO1: Learns the definition and scope of linguistics, branches of linguistic. CO2: Learn contribution of American and European school and contribution of Ferdinand de Saussure. CO3: Learn about Socio Linguistics with reference to bilingualism and multilingualism. CO3: Learn about Pidgins, Creoles, Isoglass and Diglossia, Code switching, Code mixing. CO4: Learn about Morphology and syntax.

	CC14	Travel Writing	The students learn poems, novel, short stories and essays makes the students to explore new towns and cities through the works like Interpreter of Maladies, In the Spring, India Again, Manimahesh and In an Antique land.
	DSE-3	Literary Criticism	The Students learn about: CO1: Theory of Aristotle with reference to Poetics. CO2: Theory of Longinus with reference On sublime. CO3: Theory of Philip Sidney with reference to Apology for Poetrie. CO4: Theory of William Wordsworth with reference to Lyrical Ballads.
	DSE-4	Basic Writing Skill	The students learn about: CO1: How to write article and news report. CO2: How to write news script writing and advertisement. CO3: How to draft e- mail and letter writing: personal and formal. CO4: Learn about Vocabulary, Question Tag, Determiners and preposition.
	AECC2	*ENGLISH/MIL(KOKBORORK/BENGALI/ HINDI)	English Communication makes the students learn about: CO1: Types of communication – Verbal and Non-Verbal Communication and Barriers of Communication. CO2: Speaking Skill – Monologue and Situational Dialogue, Group Discussion, How to face interview. CO3: Close Reading of Text, Summary and Paraphrasing, Analysis and Interpretation. CO4: Basic tools for Writing Skill: Learn about Vocabulary, Question Tag, Determiners and preposition.

ENVIRONMENTAL SCIENCE			
SEMESTER	**COURSE CODE**	**COURSE NAME**	**COURSE OUTCOME(CO)**
1st	**DSC- 1**	**Introduction to Environment and Ecology**	After completing the course, students will - **CO1**- understand different cosmological process, theories about how the universe and its constituents have been created. **CO2-**recognize the importance of environmental education and take necessary steps related to the protection of it. **CO3-** know the importance of different ecosystems and the organisms living in it. **CO4-** recognise the need of sustainability and resource management in daily life.
2nd	**DSC- 2**	**Consequence of anthropogenic action and Environmental chemistry**	After completing the course, students will get- **CO1**- to know different biodiversity and to understand why it is important to protect them for maintain ecological balance. **CO2-** to understand the chemical composition of abiotic components of earth. **CO3-** to understand how different anthropogenic actions are impacting the environment. **CO4- to** understand different consequences of human actions on biotic and abiotic components. **CO5-** to know about environmental laws and policies.
3rd	**DSC- 3**	**Biostatistics and Environmental Laws**	After completing the course, students will be **CO1-** Able to understand different analytical techniques and bio-statistics. **CO2-** Able to understand importance of energy conservation and sustainability. **CO3-** Able to recognise different pollution caused by human actions. **CO4-** Able to know about many health hazards due to anthropogenic actions on nature. **CO5-** Able to understand why different laws are being imposed for the protection of air, water, land and wildlife.

	SEC- 1	**Remote sensing and GIS**	Students will able to **CO1-** Learn about basic concepts of remote sensing, GPS. They will also understand the application of GIS and RS.
4th	**DSC- 4**	**Environmental Biotechnology and Ecotoxicology**	After completing the course, students will be **CO1-** Able to know about different bioremediation to control various pollution problems. **CO2-** Able to know about different toxic substance and health hazards due to the same. **CO3-** Able to understand detailed knowledge about different ecosystems and ecological services. **CO4-** Able to know the role of forest, bamboo mission and JICA project. **CO5-** Able to know about the preventions for natural disasters and role of NDMA and NIDM.
	SEC- 2	**Environmental Impact Assessment**	Students will be able to learn about basic concept of EIA, status of EIA and current issues related to the same.
5th	**DSE- 1 (A)**	**Environmental Economics and relation of environment with gender and society**	After completing the course, students will be **CO1**- Able to know about the concepts of green tax, carbon trading etc. **CO2**- Able to understand the role of women in the conservation of environment. **CO3-** Able to recognize the importance to protect wildlife. **CO4-** Ability to understand the role of tribal people in the protection of nature and tribal rights in India. **CO5-** Ability to recognise how development is impacting the life of common people. **CO6** – ability to understand the environmental ethics.

	SEC- 3 (General)	**Green Technologies**	This course will help the students to understand the importance of green technologies, green cities etc.
6th	**DSE- 1 (B)**	**Urban ecosystem and biogeography**	After completing the course, students will get **CO1-** to know about the water quality in India. **CO2-** Ability to know about wetlands and their importance. **CO3-** Ability to know the concept of green belts and green building. **CO4-** Ability to understand different biogeographical rules. **CO5-** Ability to recognize many water borne diseases & the importance of health program in India.
	SEC- 4	**Solid waste management**	This course gives a brief idea about waste management in industries, importance of 4R and policies for solid waste management.

GEOGRAPHY(HONOURS)			
SEMESTER	**COURSE CODE**	**COURSE TITLE**	**COURSE OUTCOME (CO)**
1st	**CC-1**	**Geomorphology (Theory)**	**CO1:** Gain Knowledge about Earth's interior, rock and their types. **CO2:** Develop an idea about concept of plate tectonics, folds, faults, drainage development in folded and Uniclinal structure. **CO3:** Understand the concept of geomorphology like concepts of slopes, and different landforms processes **CO4:** Acquire Knowledge about evolution of landforms in fluvial, Karst, Aeolian, Glacial, Coastal environment.
		Cartographic Technique (Practical)	**CO1:** Develop an idea about scale and Graphical representation of types of scale like linear, diagonal and vernier. **CO2:** Acquire knowledge about different types of map projection.
	CC-2	**Human Geography (Theory)**	**CO1:**Learn the Concept and Scope of Human Geography, Concept of Central Diffusion, cultural Hearth and cultural realm . **CO2:** Know about linguistic distribution, Racial division and distribution, Demographic transition, concept of fertility, population - resource relationship and migration. **CO3**: Build an idea about rural and urban settlements their types, patterns and classification and Central Business District. **CO4:** Understand the Influence of rural house building, trend of urbanization (India and world) and its salient features, the problems of cities and towns
		Morphometric Technique and Topographical	**CO1:** Understand the concept of Topographical sheet numbering **CO2:** Learn about the Interpretation

		Maps (Practical)	of Topographical Maps (platean SOI* maps).*Survey of India **CO3:** Able to do morphometric analysis of landforms using morphometric techniques like Average slope method, Relative relief method, Dissection Index, construction of profile, drainage density and transect chart.
	CC-3	**Climatology (Theory)**	**CO1**: Learn about Atmosphere, insolation, heat budget and Distribution of Temperature . **CO2:** Understand about the Atmospheric pressure and winds, jet stream and surface weather. **CO3:** Gain knowledge about atmospheric disturbances, Climatic Region and Monsoon.
		Climatology (Practical)	**CO1:** Learn to read climatological instrument reading and prepare record book on Daily pressure, temperature and relative humidity **CO2:** Gain Knowledge and will be able to do interpretation of weather maps (winter case and summer case). **CO3:** Draw and interpret Climograph and Hythergraph.
2nd	**CC-4**	**Economic Geogarphy (Theory)**	**CO1:** Understand the Concept of Economic activity, factors affecting location of economic activity. **CO2:**Gain Knowledge about different types of Primary activities. **CO3**: Develop an idea about different types of secondary activities. **CO4:** Acquire Knowledge about different types of tertiary activities.
		Staistical Techniques (Practical)	**CO1:** Learn the significance of statistics in geography **CO2:** Know the diagrammatic representation of Frequency Distribution. **CO3:** Calculation and diagrammatic representation of different measures of tendency and measures of partition values. **CO4:** understand the calculation of

			measures of dispersion or variation .
	CC-5	**Oceanography and Biogeography (Theory)**	**CO1:** Learn about Oceanography, surface configuration of ocean floor, Oceanic circulation system and tides. **CO2:** Gain knowledge about coral reefs, marine deposits and ocean resources. **CO3:** Understand nature and scope of biogeography, biosphere, ecology, distribution of plants and animals.
			CO4: Know the concepts, causes and consequences of pollution, Deforestation , Global warming and Climate change.
		Soil testing and Analysis (Practical)	**CO1:** Learn soil testing and analysis **CO2:** Draw ternary diagram using soil data.
3rd	CC-6	**Geography of India (Theory)**	**CO1:** Learn about the geology, physiography, Drainage climate,, soil , natural vegetation and forest resources of India. **CO2:** Gain knowledge about Agriculture, industry and mineral and power resources. **CO3:** Understand the population distribution, density ,growth, literacy and the spatial distribution of population. **CO4:** Learn about types and classification of settlement, influence of environment of rural house building and problems of towns and cities.
		Topographical map intrepetation (Practical)	**CO1:** Interpret the topographical map of Plain region. **CO2:** Able to understand the Physical and cultural landscape with suitable attributes.
	CC-7	**Political and Cultural Geography (Theory)**	**CO1:** Learn about meaning, nature and scope of political and cultural geography. **CO2:** Understand the concepts of: Organic state, Geopolitics,

			Territoriality, nation, sate, Frontiers boundaries, Federalism, race, language and religion. **CO3:** Know about themes in cultural Geography, major religions of the world and their distribution, Nation building in federal societies and Global Strategic models like heartland model, rimland model.
		Cartograms (Practical)	**CO1:** Learn about diagrammatic data presentation like line, bar and circle and its interpretation . **CO2:** Draw thematic maps using different types of thematic mapping techniques . **CO3:** learn about Computer assisted mapping using MS EXCEL
	SEC-1	**Soil testing and Analysis**	**CO1:** Collection of soil samples from agricultural land and Forest land **CO2:** Learn soil testing (Ph, NPK and Organic Matter) , analysis and interpretation of soil tests.
4th	**CC-8**	**Fluvial Geomorphology (Theory)**	**CO1:** Develop an idea about Fluvial geomorphology and Drainage basin as a geomorphic unit **CO2:** Know about the streams, channel pattern, drainage patterns, types of sediments load and Channel flow. **CO3:** Understand the processes of erosion, transportation deposition and their resultant landforms. **CO4:** Learn about settling velocity of small particles, stroke's law **CO5:** Analyze about fluvial hazard and disaster management,
			CO6: Understand about flood, river bank erosion and Channel bed sedimentation their causes, consequences and mitigation.
		Fluvial Geomorphology (Practical)	**CO1:** Construct and analyse Hydrograph and rating curve of Perennial and Non-Perennial rivers. **CO2:** learn to delineate drainage

			basin in survey of India Topographical Map **CO3:** Understand stream ordering and will be able to show the graphical relation between stream order, stream number and stream length. **CO4:** Calculate bifurcation ratio and measure stream length using Rotameter.
	CC-9	**Population Geography Theory**	**CO1:** Understand the nature, developments of Population geography and its relation with other social sciences. **CO2:** Know about composition, Distribution, density of Population (World and India) **CO3:** Analyse the global trend and patterns of population growth in developing countries and migration pattern. **CO4:** Learn about Population - resource region, Population problem and fertility and migration influencing policies .
		Population Geography (Practical)	**CO1:** Learn about Population projection by arithmetic method, sex ratio and work participation rate. **CO2:** Calculate different measures of fertility and mortality like Crude birth rate, Gross reproduction rate, crude death rate, Child mortality rate etc. **CO3:** Find out mean centre of population on Topographical map and analyse its shift over time.
	CC-10	**Research Methodology (Theory)**	**CO1:** Learn about research, research method, research problem and selection of research problem. **CO2:** Understand the meaning and necessity of research design, types of research design , steps in sample design, characteristics of sample design sample and census survey. **CO3**: Know about the methods of

			data collection, collection of secondary data, processing of data, elements o and types of data analysis. **CO4:** Learn about the significance of report writing, steps of report writing, types of report and precautions for writing reports.
		Field Report (Practical)	**CO1:** Necessity of field report in Practical Geography. **CO2:** Know about Household survey and Understand collection of data. **CO3:** Prepare a report from the data collected.
	SEC-2	**Demographic and socio- Economic data analysis using Secondary data(Census data)**	**CO1:** Learn about the Collection of Census Data from the Directorate of Census Operations, GOI. **CO2:** Understand Demographic and socio-economic characteristics of selected study area. **CO3:** Learn Cartographic representation and analysis of data using ms excel and can prepare report using power point.
5th	**CC-11**	**Regional Planning and development (Theory)**	**CO1:** Learn about Concept and types of region and approaches of regionalization. **CO2:** Understand the need and delineation of planning regions, NITI Aayog. **CO3**: know about the planning for tribal development and Concept of Inter-state planning ith a case study of DVC. **CO4:** learn about Measurement of human Development,regional disparities in India, Indicators of Development **CO5:** Learn about the growth pole theory, Circular Cumulative Causation, Matter of the Center versus the periphery, Theory of Unbalance Growth and Growth pole model in indian context.

		(Practical)	**CO1:** Understand the significance of Lorenz Curve and will be able to draw **CO2:** Know how to draw nearest neibour Analysis and its importance.
	CC-12	**North -East India (Theory)**	**CO1:** Know about Physical Characteristics of North East India. **CO2:** Learn about agricultural Resources, Mineral Resources, Power Resources, Human Resources, transport, communication and and Tourism. **CO3:** Gain Knowledge about Tripura in Detail which includes Physiography, Drainage, Climate, Soil, Natural Vegetation and Forest Resources. **CO4:** know about Agriculture, mineral and Power resources, human Resources transport, Communication and Tourism in Tripura.
		Surveying (Practical)	**CO1:** Brings direct interaction of different types of surveying instruments like Dumpy level, Prismatic Compass and Theodolite. **CO2:** learn about use of surveying instruments .
	DSE-1	**Social Geography (Theory)**	**CO1:** Learn about meaning and scope of social geography, society and environment and Social Categories. CO2: Understand about Origin and Growth of Human Settlement, rural settlement in India Soci0-Cultural Characteristics of Urban Settlement and Rural Urban Dichotomy. CO3: Analyse socio-cultural change through human history, modernization and its effect, modern technology and its impact and Cultural Entity. CO4: Understand the concept of social inclusion and Exclusion, crime

			as hazard, Communal Conflicts and millennium Development Goals for controlling Social Evil and Discrimination.
		(Practical)	CO1: Learn to about T-test, Chi-Square Test, Spearman's Rank Correlation.
	DSE-2	**Agricultural Geography (Theory)**	**CO1**: Learn about nature, scope and significance of Agricultural Geography, Landuse and Landcover and Determinants of Agriculture. **CO2:** Understand the concept of Agricultural Regions and Agricultural Regions of India and Crop Combinations. **CO3:** Learn about the Agricultural systems of the world (Whittlesey's Classification) which includes Subsistence system and Commercial System and Land Irritability Classification in India. **CO4**: Learn about the different models in Agricultural Geography like Input and Output Model, Conceptual Model and Land Capability Model.
		DSE-2 (Practical)	**CO1:** Learn about Agricultural Density, Ergograph and Crop Combination (using Rafiullah's Method).
6th	**CC-13**	**Geographical Thought (Theory)**	**CO1:** Gain Knowledge about development of Geographical Thought. **CO2:** Know about the Founders of Modern Geographical thought, Environmental Determinism and possibilism, Human Ecology and Quantitative Revolution.

			CO3: Understand modern concepts of Human Geography, System Approach and System Analysis **CO4:** Learn about Concepts of Modernity, Modernization and Post-Modernism. **CO5:** Analyse the changes over to postmodern Geography and different modern theories.
		CC-13 (Practical)	**CO1:**to draw and intereprate different cartographic technique by using MS Excel and MS word like Pie Diagram, Proportional Circle and Age Sex Structure.
	CC-14	**Disaster Management, Remote Sensing and Geographic Information System(GIS)**	**CO1:** Learn about Concepts and types of Hazards and Disasters **CO2:** Know about phases of disaster Management, Planning and management of Hazard and Disaster and also Learn about Building Community Cooperation and Awareness. **CO3:** Gain Knowledge about remote sensing, Photogrammetry and Visual Image Interpretation. **CO4:** Learn about Concepts, Components, functions, application, advantages , uses and limitations of GIS,
		Project on management and Planning for Disasters (Practical)	**CO1:** Encourage students for higher order thinking and problem-solving skills **CO2:** increase their knowledge of a topic
	DSE-3	**Urban Geography (Theory)**	**CO1:** Learn about meaning and scope of urban geography, origin and evolution of towns, Location and site of towns . **CO2:** Learn about different models in Urban studies, Concept, development and characteristics of Conurbation, Indian Conurbation (Mumbai, Kolkata, Delhi Metropolitan Region. **CO3:** Understand and analyse urban culture, urbanization and industrialization, urban life and urban

			development.
			CO4: Gain Knowledge about the ideas and concept of rural -urban fringe, rural urban linkages, town planning and policies of urban planning in India.
		DSE-3 (Practical)	**CO1:** Prepare residual mapping and understand its significance. **CO2:** Learn about Gini's Coefficient.
	DSE-4	**Remote Sensing (Theory)**	**CO1:** Learn about definition Remote Sensing, Remote Sensing Process, sensor, Sources of Energy and Energy Interaction in the Atmosphere. **CO2:** Know about Remote Sensing Platforms and its types, Photogrammetry, characteristics of Aerial Photographs, significance of Aerial Photos and Basic elements of Visual Image Interpretation. **CO3:** Understand about the concept of GIS, and component, origin functions application Areas and advantages of GIS **CO4:** Learn about Visual Image Interpretation.
		DSE-4 (Practical)	**CO1:** Learn about Geographic Data like Spatial attribute, raster and vector data. **CO2:** Determination of Aerial Photo Scale, flight height, Focal length **CO3:** Understand GPS coordinate readings and Visual Image Interpretation of Satellite Imagery.

HINDI			
SEMESTER	**COURSE CODE**	**COURSE NAME**	**COURSE OUTCOME(CO)**
1st	CC1	Hindi sahitya ka itihas	Students will learn the concept of history of literature, it's importance and the features of Adikal, Bhaktikal, Ritikal in context of socio - cultural and political condition of that period.
	CC2	Hindi kahaniyan	They will understand the development of Hindi stories and the students will learn the vision of each writer in their respective areas through their stories.
2nd	CC3	Hindi sahitya ka itihas (Adhunik kaal)	The students will understand the literary trends of Adhunik kaal. They will also learn the features of Bhartendu yug, Dwiwedi yug, chayavad, pragtivad, prayogwad and nayi Kavita, in context of socio-cultural and political conditions of that period. They will understand the eminent Hindi writer of each period.
	CC4	Madhyakaleen Kavita	Students will gain the knowledge by Sant Kabir's writings as well as Surdas's poetry. They will get to know the socio cultural and political conditions of that period in the writings of Bihari and Ghananand.
3rd	CC5	Adhunik Hindi Kavita	They will understand the spirit of nationalism in Bhartendu's poetry. Through the poem of Maithili Sharan Gupt, Prasad's, and Nirala students will learn the vision
	CC6	Adhunik Hindi upanyas	Students are able to understand the history of upanyas and they'll also to understood the vision of novelists through their novels.

	CC7	Hindi Natak	Students will be able to understand the history and concepts of Natak. They will have the knowledge of various issues and challenges through the Natak of Bhartendu, Jaishankar Prasad and Mohan Rakesh.
	SEC-1	Karyalayi Hindi	Students understand the meaning and concept of functional Hindi. They will be able to understand the official language acts.
4th	CC8	Hindi gadya vidhaon ka vikas	Students will gain the knowledge of various forms gadya kahani, nibandh, alochona, aatmakatha, jeevani, sansmaran and rekhachitara.
	CC9	Bhasha vigyan	Students are able to understand the concept, features and various forms of Bhasha. They gained the knowledge about different types of Bhasha vigyan.
	CC10	Chatavadottar Hindi kavitayen	The students can understand the vision and importance of chatavadottar Hindi kavita through the poems of Agey, shamsher Bahadur, Nagarjuna and Sudama Pandey Dhumil.
	SEC-2	Hindi Bhasha ka vikas	Students are able to understand the concept, features and difference of Bhasha. They will be able to understood the three forms of Bhartiya Arya Bhasha. They will also able to know the development, features and limitations of Devanagari lipi and also understand various forms of boli.
5th	CC11	Hindi kavya shastra	The students will be able to understand the concept and history of kavya shastra. They will understand different kinds of kavya shastra and the views of different Acharya Kavi.
	DSE-1	Lok sahitya Lok sahitya	The students will gain the knowledge of folk literature. They will understand the rich folk cultural heritage of India. They will also have the ability to understand the concept, features and different types

			of folks. The students will gain the knowledge of folk literature. They will understand the rich folk cultural heritage of India. They will also have the ability to understand the concept, features and different types of folks.
	DSE-2	Hindi: Rastriya kavya dhara	Students will be able to know the concept of rashtriya kavya dhara including its features and situations. Through the poet's view they'll be aware and understand the vision of poet.
6th	CC13	Prayojan mulak Hindi	Students will be able to understand and study about functional Hindi and they can learn the usage of Hindi in different fields like Bank etc. They can develop translation skills by learning translation from Hindi to English Vice - Versa.
	CC14	Hindi Nibandh	Students are able to understand the concept and development of Hindi Nibandh. They will have the ability to understand the vision of different nibandh kar through their nibandh.
	DSE-3	Kabir Das	Students will understand the vision of Kabir and have the ability to understand his views and philosophy of life through sakhi and pada.
	DSE-4	Surya Kant Tripathi Nirala	Students will know the personality and philosophy of life as well as his poems.
	AECC2	*ENGLISH/MIL (KOKBORORK/BENGALI/ HINDI)	Students will understand and learn the basic concepts of Hindi Bhasha and Hindi vyakaran. It will strengthen the quality of Hindi language.

HISTORY			
SEMESTER	**COURSE CODE**	**COURSE TITLE**	**COURSE OUTCOME (CO)**
1st	CC 1	Early India	This paper consists of ancient Indian History from pre-historic period to the eve of Gupta era. It helps the students to have a better grasp of our rich heritage and culture as well as the society, politics, culture and religious condition of our early civilisation.
	CC 2	Early & Early Medieval India	From this portion of syllabus students can have the concept of decentralisation of administration, initiation of feudalism in Indian context and also the practices of scientific, literary, and artistic knowledge etc. of this country during Gupta period.
2nd	CC 3	History of India (1210-1526 AD)	This paper consists of the history of advent of Islams with new pattern of administration, war strategy, culture and religion, tax collection etc. that firstly created conflict and then the assimilation with the early one.
	CC 4	History of India (1526-1707AD)	The students will be able to know the evolution of Mughal rule in India. They will be able to discuss the political, social, economic and religious condition of India during the Mughal period. They will also be able to discuss the development of art and architecture in the Mughal period.

3rd	CC 5	History of India (1707-1860 AD)	The students will be able to analyse the history of the establishment of British rule in India and paramountcy of the British. They will also able to discuss the expansion of British rule in India, their revenue and administrative policy, education policy and Indian's reaction against it.
	CC 6	History of India (1860-1950 AD)	This paper enables the students to understand the concept of healthy nationalism and inspires them to analyse the basis of independent India with different approach.
	CC 7	History of Modern Europe (1789 - 1870 AD)	The student will be able to discuss on European History from 1789 to 1870. They will be able to analyse the French Revolution, Unification of Italy and Germany, modernization of Russia, Industrial revolution, socialism etc.
	SEC- I		This paper helps to enhance the writing and composing skill of the students. They will be able to discuss the different issues which help to the rise of modern India. Their discussion will include commercialisation, de-industrialisation, education, peasant and labour movement, nationalism, freedom movement and Independence of India.

4th	CC 8	History of Modern Europe (1871 - 1919 AD)	The students will be able to enrich themselves with the knowledge of European diplomacy from 1871 to 1919 A.D. They will learn how the world had to face First World War and its effects.
	CC 9	International Relations (1919 -1971 AD)	This paper get the students enabled to understand the global political and diplomatic issues since the end of second world war. They may know the causes of the several small and big wars and also realise the consequences which stimulates them towards the maintenance of world peace in order to save the mankind.
	CC 10	History of Greece (510 BC -356 BC)	Greece is the motherland of history and historians. From this history our students get to know the origin of modern states, real meaning of democracy, the changes of concepts of citizenship from that day to this day along with the various approaches to Philosophy , style of architectures, and most of all the art of history writing.
	SEC -2		The student will be able to enhance their writing skill on European History from 1780 to 1939. They will be able to analyse the French Revolution, Unification of Italy and Germany, 1st World War, Fascism and Nazism, 2nd World War etc.

5th	CC 11	History of Medieval Europe (800 AD -1600 AD)	This paper will help the students to gather knowledge on the history of medieval Europe. They will be able to discuss the political, social, religious and cultural condition of Europe in that period. They can analyse Crusade, Feudalism, 12th and 15th century Renaissance etc.
	CC 12	History of England (1485 -1800 AD)	The students will be able to analyse the growth of parliamentary system in the Tudor and Stuart period in England. They will also be able to analyse the reformation movement, price revolution, Industrial Revolution, spread of Imperialism etc.
	DSE 1	Socio-cultural and economic history of early and medieval India	This paper intends to apprise the student about the socio-religious and economic condition in the early and medieval period of India. It will help them to understand the socio-cultural evaluation process in India.
	DSE 2	Economic history of Bengal (18th, 19th and 20th century)	This paper will enrich the student exclusively about the economic condition of Bengal in the 18th, 19th and 20th century. They will get a broad idea about agriculture, industry, trade and commerce, currency and banking system, labour movement etc.

6th	CC 13	History of China and Japan (1839-1949 AD)	This paper will provide the student the knowledge about political, social and economic condition of Far East (China and Japan) in the 19th and 20th century. They will also be able to know about the rise of communism in China and facism in Japan.
	CC 14	History of North East India (upto 1949AD)	No knowledge can be completed without knowing its own. This course is to provide the knowledge of their own place with the neighbours which is very rich with various archaeological and literary sources, hence the course attracts the students towards the field of research as well as creates the interest to the subject they learn.
	DSE 3	History of Bengal renaissance	The course intends to provide the student the knowledge about the political, socio-economic and cultural condition of Bengal in the 19th century. It will also help them to know the history of Bengal Renaissance. The students will also know the role of literature in the socio-cultural movement in Bengal.
	DSE 4	Colonial India ; Science, Economy, Caste based movement and women participation in the freedom struggle .	The student will be able to know from this paper the development of science, especially medical science, and socio-economic condition of India in the colonial period. This paper will give them information about the cast-based movement and peasant movement of India in the 20th century. It will help them to know about the role of women in the freedom struggle of India. All these will help to increase nationalism among them.

KOKBOROK			
SEMESTER	**COURSE CODE**	**COURSE TITLE**	**COURSE OUTCOME(CO)**
1st	DSC-I	History of Kokborok Language and Literature	• Genetic classification, historical development of Kokborok. • The students would gain a brief understanding of the history of language. • Students would gain a knowledge in the field of kokborok literature.
2nd	DSC-II	Kokborok Poetry-I	• To develop an understanding of poetic forms. • To gain a knowledge insight into poetic devices employed by the poets.
	AECC-II	Kokborok MIL	• To gain a knowledge of communication skill, enhancement of reading and writing skills.
3rd	COMPULSORY MIL-I	Kokborok	• The Students should learn to analyze anonymous pieces of poetry using main ideas, poetic devices etc.
	SEC-I	Kokborok Language Teaching	• To gain a knowledge about skill enhancement of kokborok languages. • Status of the Kokborok as at present.
	DSC-III	Early Literature, Translation and Transcription	• To gain a basic concepts of Translation and Transcription. • Know about Jaduni and its types and meaning. • Know about kokborok Proverbs and Riddles.
4th	COMPULSORY MIL-II	Kokborok	• To enable students to practice the act of translation from other languages into Kokborok/English/Bengali.
	SEC-II	Kokborok	• Know the idea of writing project. And also it will help them to think critically and analytically while writing.

	DSC-IV	Novel, Short Stories & Literary Essays	• The lucid prose style of the short story, essays enables the students to comprehend, interrogate, and redefine multi-faceted aspects of culture. • The students are introduced to the deeper of the genre of the novels, and the reflection of human emotions in the novels.
5th	SEC-Paper-III	Kokborok	• To know about translated literature in kokborok (Meghdut by Kalidasa in kokborok by Purna Chandra Debbama & Rabidra Kishore Debbarma. • Know about translated literature in kokborok (Gura by Rabindranath Tagore in kokborok by Laxmidhan Murasingh. • know about translated literature in kokborok (Athuk: An akademi award-winning Novel in Malayalam Languages of Takashi Aivasankara Pillai. • Know about first Novel in kokborok literature.
	DSE- I(A)	Kokborok	• Know kokborok short stories written by Shyamlal Debbarma, Dr. Atul Debbarma and Utpal Debbarma. • Know kokborok novel written by Shyamlal Debbarma. • To know about kokborok drama written by Narendra Debbarma and Ruhi Debbarma. • To know about kokborok essays wriiten by Shyamlal Debbarma, Rabindra Kishore Debbarma and Snehamoy Roy Chowdhury.
	GE(G)-I	Drama and Poems	• To know about drama Hakhor Biisingni nongkhorbaisidi by Nagendra Jamatia.
			To know about drama Longtraini Ekolobya by • Nanda Kumar Debbarma. • Know kokborok poems written by Rahindra Debbarma, Sefali Debbarma and Sachlang Tripura.

			• Know kokborok poems written by Utpal Debbarma, Sabita Debbarma and Laxmidhan Murasingh.
6th	SEC--IV	Kokborok	• Know the idea of writing project. And also it will help them to think critically and analytically while writing.
	DSE- I(B)	Kokborok	• Know about the origin of poetry • Know about the origin of drama, short stories, and novel. • Translated stories of various writers edited by Naresh Chandra Debbarma. • Know about the kokborok essay written by Dasarath Dev and Rabindra Kishore Debbarma.
	GE(G)-II	Kokborok	• Know kokborok short stories written by Purna Chandra Debbarma, Sunil Debbarma, Sudhanya Tripura, and Ajita Tripura. • Know kokborok novel written by Bijoy Debbarma and Sefali Debbarma.

MATHEMATICS

SEMESTR	COURSE CODE	COURSE TITLE	COURSE OUTCOME (CO)
1st	CC-1	Calculus	Students will gather knowledge on Differential Calculus, Integral Calculus and their applications.
	CC-2	Algebra	Students will learn basic things of abstract algebra, Complex numbers, Matrices and theory of equations
2nd	CC-3	Real Analysis	Students will gather knowledge on Real Analysis, Sequences and Series
	CC-4	Differential Analysis	Students will gather knowledge on differential equations and how to solve them
3rd	CC-5	Theory of Real Functions	Students will go through the theory of Real analysis such as Differentiability, Uniform Convergence, Power Series
	CC-6	Vector Algebra, Group Theory, Ring Theory and Field	Students will gather advanced knowledge on Vector Algebra and Abstract Algebra
	CC-7	Vector Analysis and Partial Differential Equations	Students will gather knowledge on Vector Analysis, Partial differential equations and how to solve them
	Skill Enhancement Course	Logic and Sets	Students will go through Logical thinking and they will gather advanced knowledge on sets
4th	CC-8	Analytical Geometry of Two and Three Dimensions	Students will understand two and three dimensional geometry
	CC-9	Advanced Integral Calculus	Students will understand and gather knowledge on Advanced Integral Calculus and Fourier Series
	CC-10	Tensor Analysis and Linear Algebra	Students will gather knowledge on Tensor Analysis and Linear Algebra
5th	CC-11	Mathematical Analysis	Students will gather basic knowledge on function of Bounded Variation, Absolutely Continuous functions, Multiple Integral and Metric Spaces.
	CC-12	Computer Programming in C and practical	Students will go through basics of computer and will learn C programming

	DSE-1	Statics and Dynamics	Students will gather knowledge on Statics and Dynamics
	DSE-2	Linear Programming Problem and Game Theory	Students will learn linear programming problem, Game Theory and how to use these them in Optimization.
6th	CC-13	Theory of Functions of a Complex Variable	Students will gather basic and advanced knowledge on function of Complex variables
	CC-14	Numerical Methods and Practical using C	Students will learn techniques of Numerical analysis and to use Numerical analysis in solution of algebraic and differential equations.
	DSE-3	Probability and Statistics	Students will gather knowledge on topics of Probability ad Statistics
	DSE-4	Laplace and Fourier Transforms	Students will gather knowledge on Laplace and Fourier transforms. Application of these concepts.

PHILOSOPHY

SEMESTER	COURSE OUTCOME (CO)
1ST	Students will acquire the knowledge of Metaphysics, Epistemology and Ethics of Indian Philosophy and Western Logic. It helps to form the capacity to analyze various situations in life.
2nd	Knowledge of History of Western Philosophy, western Ethics and Indian Ethics enhances the defensive power and ability of students to establish their own views and challenging problems of philosophy.
3rd	Study of Modern Western Philosophy, Contemporary Western Philosophy, Contemporary Indian Philosophy, Psychology, Moral Philosophy, Human Values, Environmental Ethics, professional Ethics and Skill Enhancement Course helps to develop an integrated and holistic view of life and world.
4th	Study of Tarkasangrah with Dipika, Text of Western Philosophy, Truth Functional Logic, Skill Enhancement Course in Western and Indian Philosophy improves the Logical and critical attitude of students that they can argue and evaluate in a constructive way.
5th	Acquiring the knowledge of Modern Philosophical Analysis of John Hosperse, Monism, Philosophy of Mind a student develops the capacity to communicate with others, understand an issue from different perspectives and find out a rational solution.
6th	Knowledge of the Srimad bhagavadgita, Bertrand Russell's Philosophy, The Philosophy of Swami Vivekananda, Sri Auribindo, Mahatma Gandhi, Dr. B. R. Ambedkar, Social Philosophy and Political Philosophy helps to form a strong foundation of character and personality.

PHYSICAL EDUCATION			
SEMESTER	**COURSE CODE**	**COURSE TITLE**	**COURSE OUTCOME (CO)**
1st	DSC-I	History of Physical Education and Olympic Movement	The students gets the knowledge about the History of Physical Education and Sports and very specially the Ancient and Modern Olympic Games.
2nd	DSC-II	Health Education, Nutrition and Sports Injuries	As health and fitness is the burning issue in the modern life, students get to know about the modern life style and also about the diet and balance diet, it also teaches about sports injuries and its precaution and rehabilitations.
3rd	DSC-III	Anatomy and Physiology in Physical Education	Physical fitness is one of the most vital part of the human life, so the students learns about the anatomical structure and the physiological changes in the human body due to exercise.
	SEC-I	Yoga and Yoga Therapy	Yoga is nowadays becoming very popular in our day-to-day life, so the students learn about various asanas and the yoga therapy for various rehabilitation purpose.

4th	DSC-IV	Sports Training and Sports Psychology	Every athlete or sports person loves to give their best performance in their respective games and sports, so in the subject outcome the students know about the various types of training methods for better performance and also learn how to handle various situations in various tournaments.
	SEC-II	Fitness and Sports Skill Tests	In these courses the students learn in practical method of various test in physical fitness and sports test for research and better perfection.
5th	DSE-1(A)	Kinesiology and Biomechanics	The knowledge of kinesiology and biomechanics of very necessary in the field of physical education and sports which helps in perfection of various skills in any sports.
	SEC-III	Layout and Management of Sports Field and Equipment	Being the students of physical education, students learns how construct a court/play field for various games and sports.
	GE(G)-I	Information Technology and Computer Applications in Physical Education	Apart from physical education knowledge of computer is also necessary for better execution of physical education and sports

6th	DSE-1(B)	Measurement, Evaluation and Statistics	In physical education measurement, evaluation and statistics plays a vital role in better performance and research area.
	SEC-IV	Coaching and Officiating	Students learn about how to teach the children and how to officiate in any tournaments.
	GE(G)-II	Methods of Teaching and Organization	As like professional course, the students get an opportunity to take various classes as like teachers by teaching various topics of physical education.

PHYSICS			
SEMESTER	**COURSE CODE**	**COURSE NAME**	**COURSE OUTCOME (CO)**
1st	CC1	Mathematical Physics -I	Students learn different mathematical approaches which is helpful for understanding the various physical concepts using the mathematical tools.
	CC2	Mechanics	Students learn the Properties of different physical phenomenon in their daily life with practical experience.
2nd	CC3	Electricity & Magnetism	Students learn about the concept & properties of electric, magnetic & electromagnetic field with practical experience.
	CC4	Waves and Optics	Students acquire knowledge about wave motion & their properties. They also learn about the different optical phenomena with practical experience.
3rd	CC5	Mathematical Physics -II	Students learn different mathematical approaches in some advance form which is helpful for understanding the various physical concepts using the mathematical tools.
	CC6	Thermal Physics	This course gives knowledge about the thermal properties of different physical phenomena with hand-on experience.
	CC7	Digital systems and applications	Covering the very important and fascinating areas of digital electronics with many experiments associated with it.
	SEC-1	Basic Instrumentation Skills	Acquire technical and manipulative skills in using laboratory equipment, tools and materials like Multimeter, Electronic voltmeter, AC milivoltmeter, CRO,Signal generators, Q-Meters etc.

4th	CC8	Mathematical Physics -III	Complex analysis is an important tool for differential equations (ordinary and partial), algebraic geometry and number theory. It is a core requirement for the students of physics to handle the abstract mathematical world.
	CC9	Elements of Modern Physics	Covering the very important and fascinating areas of modern physics with many experiments associated with it.
	CC10	Analog systems and Applications	This course provides the students with the fundamental skills to understand the basic of semiconductor electronics. It will built numerical background for design of electronic circuits.
	SEC-2	Physics Workshop Skill	Acquire technical and manipulative skills in using laboratory equipment, tools and materials like soldering of electrical circuits having discrete components, making regulated power supply etc.
5th	CC11	Quantum Mechanics and its applications	The quantum theory allows the students to understand the world of the very small and fundamental properties of matter. The deepest understanding of atomic world comes from the advent of the quantum theory.
	CC12	Solid State Physics	This course is intended to provide an introduction to the physics of solid matter which is a very wide branch where extensive research is going on.
	DSE-1	Nuclear and particle physics	Learning nuclear and high Energy particle Physics students understand what the world is made of and how it works at the smallest and largest scales, seeking new discoveries from the tiniest particles to the outer reaches of space.
	DSE-2	Advanced Mathematical Physics	The concept of tensors provide a concise mathematical framework for formulating and solving physics problems in areas such as mechanics (stress, elasticity, fluid mechanics, moment of inertia, ...), electrodynamics etc. The concept of Linear algebra helps to grow the basic concept in the modern presentation of geometry. It is mostly used in Physics to define the basic objects such as planes, lines and rotations of the object. It allows us to model many natural phenomena, and also it has a computing efficiency.

6th	CC13	Electromagnetic theory	This course explains the phenomena associated with charged particles in motion and changing electric and magnetic fields. Electrodynamics is concerned with effects such as magnetism, electromagnetic radiation and electromagnetic induction which knowledge is helpful for the study and research of electro- optics and radiation field.
	CC14	Statistical Mechanics	Mathematical framework that applies statistical methods and probability theory to large assemblies of microscopic entities
	DSE-3	Classical Dynamics	Einstein's special relativity has a major impact on the field of physics, in the calculation and understanding of high-velocity phenomena, and understanding of space and time. It also helps to understand the impact of velocity on different physical phenomena. Mathematical framework that applies statistical methods and probability theory to large assemblies of microscopic entities
	DSE-4	Nanomaterials and Applications	This course deals with the basics and applications of Nanotechnology a very emergent branch of physics. Students learn the application in information and communications sectors, in food technology, energy technology, in medical products and medicines. The knowledge to use Nanomaterials for the reduction of environmental pollution also offer new opportunities for future generations.

POLITICAL SCIENCE			
SEMESTER	**COURSE CODE**	**COURSE TITLE**	**COURSE OUTCOME**
1st	CC1	Understanding Political Theory	The students can able to understand key concepts in political theory. This course sharpened their understanding of political discourses and the ability to make the scientific enquiry into the political phenomenon and political questions.
	CC2	Constitutional Governance and Democracy in India	This course exposed the students to the fundamental themes and core institutions and ideas of Indian constitution and functioning of the government.
2nd	CC3	Political Theory: Concepts and Debates	By studying this paper, the students can debate on the concepts mainly liberty, equality, rights and justice.
	CC4	Political Process in India	This course introduced students to some major political institutions like Political parties and to institutional challenges like caste, religion, communalism in Indian politics.
3rd	CC5	Introduction to Comparative Government and Politics	The course introduced the students with different types of political systems and functioning of governments. This enabled the students to understand some debates in politics relating to state- building and promoting democracy.

3rd	CC6	Public Administration	This course familiarized the students with meaning, key concepts, and schools of thoughts in public administration. Further, understanding of the dynamics of the functioning of organizations led us to think about communication, motivation, leadership and conflict management in the organization.
	CC7	International Relations and Organisations	This course equipped students with knowledge in international politics and in significance of international Relations including the understanding on approaches, concepts, events and organisations of international relations.
	SEC-1	Democratic Awareness with Legal Literacy	The course acquainted students with the structures and manner of functioning of the legal system in India.
4th	CC8	Political Processes and Institutions in Comparative Perspective	This course brought the political processes of different countries from a comparative perspective. The theoretical approaches of the course will enable and enrich the students to understand the importance of different political processes.
	CC9	Public Policy and Administration in India	This course provided students with understanding of the public policy and administration to the students. The course enabled the students to examine some of the key public policy initiatives taken in India particularly in the field of social welfare administration in India.
	CC10	Global Politics	This course developed international mindedness in students through an examination of fundamental political concepts and debates that have global significance. The course encouraged

			the students to be well acquainted with contemporary issues-local to global level-
			enabling the students to increase awareness and appreciation about their responsibility as global citizens of increasingly interconnected world to share their ideas and opinion for a better and inclusive world.
	SEC-2	Legislative Practices and Procedures	This course familiarized the students with the legislative activities in India both in the states and the center. It deepened the understanding of the process, procedure and working of the legislature.
5th	CC11	Classical Political Philosophy	This course introduced the students to the key debates and major ideas of Western political thought. It enabled the students to understand and interpret the major developments in contemporary political debates and discussion.
	CC12	Indian Political Thought-I	This acquainted students with the vast repository of ideas and institutions produced by ancient Indian philosophers on politics and management of statecraft, kingship, the functioning of government including the monarchy and bureaucracy, and their relationship with the people.
	DSE-1	Human Rights in a Comparative Perspective	The course provided an introduction to the basic human rights philosophy and instruments for safeguarding human rights in the USA, India and the Peoples Republic of China including challenges for protecting human rights in these countries.

6th	CC13	Modern Political Philosophy	This course demonstrated a capacity among students for critical and analytical thought about issues central to political philosophy. It improved their ability to communicate their knowledge and beliefs of these thinkers and central themes found in their political philosophy
	CC14	Indian Political Thought-II	The course introduces a wide span of thinkers and themes that define the modernity of Indian political thought depicting their relevance in contemporary India.
	DSE-3	Colonialism and Nationalism in India	This course exposed the students to different schools of understanding about colonialism and nationalism in India. including why India was partitioned and what were the ideological premises of partition of the country and demarcation of boundaries of two separate nation states.
	DSE-4	India's Foreign Policy in a Globalizing World	The course showed the integral linkages between the 'domestic' and the 'international aspects of India's foreign policy by stressing on the shifts in its domestic identity and the corresponding changes at the international level.

PSYCHOLOGY			
SEMESTER	**COURSE CODE**	**COURSE TITLE**	**COURSE OUTCOME(CO)**
1st	CC-1	Introduction to Psychology	After completion of the course, students should be able to: CO 1: Learn the basics of psychology, its perspectives, methods, fields. CO 2: Learn and understand about the process of perception, thinking and problem solving. CO 3: Know the concept of learning and motivation. CO 4: Learn about the basics of memory and emotion
	CC-2	Biopsychology	After completion of the course, students should be able to: CO 1: Learn about the basics of Biopsychology CO 2: Learn about the basics of neurones CO 3: Understand the Nervous System CO 4: Know about the major glands
2nd	CC-3	Psychology of Individual Differences	After completion of the course, students should be able to: CO 1: Understand the concept and theories of personality CO 2: Learn about the concept and theories of intelligence, including emotional intelligence CO 3: Understand the concept and relation between interest and attitude, self-esteem, self efficacy, self identity CO 4: Have an understanding about enhancing individual's potential
	CC-4	Statistical Methods for Psychological Research – I	After completion of the course, students should be able to: CO 1: Appreciate the importance of statistics in psychology and learn about descriptive and inferential statistics and learn how to compute percentiles CO 2: Graphically represent data like histogram, polygon, cumulative frequency graph and bar diagram.

			CO 3: Measure central tendency like mean, mode, median CO 4: Learn about measures of variability like range, average deviation, quartile deviation and standard deviation
3rd	CC-5	Psychological Research	After completion of the course, students will be able to do CO 1: Understand about the basics of research in psychology, research problem and hypothesis CO 2: Have a clear understanding of experimental methods including probability and non-probability sampling methods. CO 3: Learn about non-experimental methods (case study, observation, surveys and interviews) CO 4: Learn about non-experimental menthos (psychological testing, standardisation, reliability and validity)
	CC-6	Development of Psychological Thought	After completion of the course, students should be able to: CO 1: Learn about the basics of human psyche including ancient, medieval and psychoanalytic psychology and also Indian Psychology CO 2: Learn about the early schools of Psychology (Structuralism, Functionalism, Behaviourism and Gestaltism) CO 3: Have an understanding of Psychoanalytic and Humanistic orientation (Freudian Psychoanalysis, Maslow's theory) CO 4: Know about contemporary development in Women Psychology and feminism (Karen Horney, gender differences in emotion and leadership)
	CC-7	Social Psychology	After completion of the course, students should be able to: CO 1: Learn about the basics of social psychology, relation with sociology and anthropology, areas of applications – health and workplace.

			CO 2: Understand about social world (self concept, self esteem, social identity, social cognition, social perception and attitudes) CO 3: Understand about social interaction and influence (interpersonal attraction and prosocial behaviour) CO 4: Learn about group dynamics and intergroup relations (co-operation and conflict, prejudice and intervention techniques
	SEC-1	Stress Management	After completion of the course, students should be able to: CO 1: Learn about the basics of stress CO 2: Learn about the relationship between stress and health CO 3: Know how to managing stress (yoga, meditations, relaxation training, biofeedback) CO 4: Understand about stress and its coping
4th	CC-8	Statistical Methods for Psychological Research – II	After completion of the course, students should be able to: CO 1: Learn inferential statistics and hypothesis testing about single means, normal distribution, standard score and the normal curve, divergence from normality (skewness and kurtosis). CO 2: Understand hypothesis testing about the difference between two independent means (sampling distribution, t-test) CO 3: Understand hypothesis testing for categorical variables and inference about frequencies (chi-square test, contingency coefficient-concept, product moment and rank difference method) CO 4: Learn about non-parametric statistics & SPSS
	CC-9	Developmental Psychology	After completion of the course, students should be able to: CO 1: Learn about the concepts and theories of human development CO 2: Learn about the periods of Development (prenetal development, birth & infancy, childhood and adolescence) CO 3: Understand the domains of human development (physical, emotional, and personality development) CO 4: Understand the socio-cultural contexts

			of human development (family, peer, media and schooling)
	CC-10	Applied Social Psychology	After completion of the course, students should be able to: CO 1: Learn about Applied Social Psychology CO 2: Learn how to applying Social Psychology in health and organisation (job satisfaction, interpersonal processes, communication and group decision making) CO 3: Learn how to applying Social Psychology in community and diversity CO 4: Learn how to applying Social Psychology in environment (environmental psychology) and criminal justice system
	SEC-2	Educational Psychology	After completion of the course, students should be able to: CO 1: Have a basic understanding of educational psychology CO 2: Learn about human diversity and education CO 3: Learn about effective teaching and classroom management CO 4: Learn about exceptionality and special education
5th	CC-11	Understanding Psychological Disorders	After completion of the course, students should be able to: CO 1: Understand about abnormality (classification, clinical assessment and diathesis stress model) CO 2: Learn about the clinical states (anxiety, conversion and dissociative identity disorders) CO 3: Learn about developmental disorders (mental retardation, autistic disorder, learning disabilities and ADHD) CO 4: Learn about substance related disorders (alcohol and drug addiction) and eating disorders (anorexia nervosa and bulimia nervosa)

	CC-12	Organisational Behaviour	After completion of the course, students should be able to: CO 1: Learn about the general concepts of organisational behaviour. CO 2: Understand the individual level processes (employee attitude, early and contemporary theories of work motivation and
	DSE-1	Positive Psychology	After completion of the course, students should be able to: CO 1: Learn about the basics of positive psychology CO 2: Understand about positive emotional states and processes (happiness and emotional intelligence) CO 3: Understand about positive cognitive states and processes (hope and optimism; flow and wisdom CO 4: Understand about the application of positive psychology in work, education, aging and health
	DSE-2	Health Psychology	After completion of the course, students should be able to: CO 1: Learn about the basics of health psychology CO 2: Understand about behaviour and theories of health behaviour CO 3: Understand about the nature, sources and effects of stress on physical and mental health (coping and stress management) CO 4: Learn about health enhancing and protective behaviour
6th	CC-13	Understanding and Dealing with Psychological Disorders	After completion of the course, students should be able to: CO 1: Learn about the basics of schizophrenia CO 2: Learn about mood disorders (bipolar affective disorder, major depression and dysthymic disorder and suicide) CO 3: Learn about antisocial personality disorder, borderline personality disorder and gender identity disorder CO 4: Learn about pharmacotherapy &

			electroconvulsive therapies and psychological treatments
	CC-14	Counselling Psychology	After completion of the course, students should be able to: CO 1: Learn about the basics of counselling CO 2: Learn about the techniques of counselling (psychoanalytic, behaviouristic and cognitive techniques CO 3: Understand about the applications of counselling (child, family and career counselling) CO 4: Understand about the Indian approaches of counselling (yoga and meditation) and the use of technology in counselling
	DSE-3	Human Resource Management	After completion of the course, students should be able to: CO 1: Learn about the basics of Human Resource Management CO 2: Learn about human resource practices (job analysis, recruitment and selection, training, etc.) CO 3: Learn about communication and negotiation skills CO 4: Learn about organizational change (ADKAR model) and development
	DSE-4	Community Psychology	After completion of the course, students should be able to: CO 1: Learn about the basics of community psychology CO 2: Understand about the core values of community psychology CO 3: Know about health promotion (with emphasis on child and old age in Indian context) CO 4: Understand about community development and empowerment with case studies in the Indian context.

SANSKRIT			
SEMESTER	**COURSE CODE**	**COURSE NAME**	**COURSE OUTCOME (CO)**
1st	CCI	Origin and development of some Mahakavya and Gitikavya	This course aims to introduce the different types a Kavya, Mahakavya and Gitikavayas of Sanskrit Literature
	CC2	Vedic Literature	This course on Vedic literature aims to introduce various types of Vedic text. Students will also be able to read Upanishad where primary Vedanta view is propounded. It will also facilitate the students to know about philosophical, moral and scientific principles of the Vedic period
2nd	CC3	Classical Sanskrit Literature (Prose)	This course aims to acquaint students with classical Sanskrit prose literature. Origin and development of prose and also included in this course to get acquainted with the beginning Sanskrit prose literature. This course also seeks to help students negotiate text independently.
	CC4	Study of the Srimadbhagavadgita for self-Management.	This course intends to indicate among the students that the study of Bhagabadgita with help them to manage their cognition, emotion apparatus confusion and conflict of mind through the study of this course. Students will be able to develop their personality. This course will also seek to help the students negotiate the text independently without referring to the traditional commentators so as to enable them to experience the richness of the text.

3rd	CC5	Classical Sanskrit Literature (Drama)	This course aims to acquaint students with the most famous dramas of Sanskrit literature, which represent the different stages in the growth of Sanskrit drama.
	CC6	Poetics and Literary criticism	Through this particular paper and units, the students get knowledge of the poetics, forms of Kavya, Alamkara and Chanda etc. i,e, this literary criticism aims to providing the students with the knowledge of fundamental principles of literary criticism in the Indian tradition of Sanskrit language. Apart this course will develop capacity for creative writing and literary appreciation among the students.
	CC7	Indian Social Institution and Polity	The aim of this course is to make the students acquainted with various aspects of political institutions and Indian polity as propounded in the ancient Sanskrit texts from Vedic and later texts in Dharma Sastra and Arthasastra.
	SEC-1	1. Kalidasa and his dramas. 2. Kalidasa and his Kavyas 3.Bhabavuti and his works. 4. Asvaghosa and his works 5. Banabhatta and his works 6. Magha and his works 7. Bhasa and his works. 8. Content of the Sankhyayoga 9. Content of Karma yoga 10. Fundamental Doctrines of the Upanisads.	This particular course aims to have the social leadership skills that are crucial for students to succeed in their professional and personal lives. This course is designed to help students enhance their skills in communication, language and personality development along with deeper understanding of the subject This course is taught with participant-centric style of teaching

4th	CC8	Indian Epigraphy and Paleography, History of Ancient Indian Science and Medicine	This particular course aims to get students acquainted with Indian Epigraphy. Introduction of Ancient Indian Scripts, contribution of some scholars in the field of Epigraphy, also to gather knowledge of Ancient Indian Science and mathematics.
	CC9	Sanskrit Literature - Classical and Modern	This course aims to get students acquainted with the journey of Sanskrit literature from classical period to modern period. It also intending to give an outline of different traditions through students will be able to know different branches of Sanskrit literature.
	CC10	Sanskrit and World literature	This particular course aims to acquaint students to know the influence of Kalidasa's writings on Western literature, presence of Sanskrit words in world languages, Sanskrit study centres in Asia, Europe and America etc.
	SEC-2	1. Origin and development of Historical Kavyas 2. General characteristics of Indian philosophy. 3. Importance of the Manusamhita in the field of smriti Literature. 4. Different types of prose literature in Sanskrit. 5. Philosophical hymns in the Rigveda. 6. Subject matter of the Isopanisad	Actually, the skill enhancement course is designed to help the students enhance their skills in communication, language and personality development along with deeper understanding of the subject. This course is taught with participant centric style of teaching. Emphasis is laid on experimental learning with host of activities to ensure students engagement that will mould students into leaders who will priorities the well-being of society in their future life

		7. Bharabi as a poet in Sanskrit literature 8. Influence of the Ramayana in society and contemporary literature 9. Pamini as a Sanskrit grammar marian. 10. An acquaintance with the Mahapuranas.	
5th	CC11	Vedic Literature	Through this paper students get knowledge of four Vedas and their Samhitas.
	CC12	Sanskrit Grammar	This course aims to get the students to know the basic of Sanskrit grammar, including the rules of grammar. Besides, the students will be able to translate sentences and write in Sanskrit
	DSE-1	Indian system of Logic and Debate	This course aims to get the students acquainted with the basic approach to study Indian system of logic and debate. It also intends to give an elementary understanding of Indian Philosophy and to enable students to handle philosophical text in Sanskrit easily.

	DSE-2	Art of Balanced Living	Through this course students get knowledge the students, the methods of living self presentation, Yoga etc.

6th	CC13	Ontology and Epistemology	Through this paper students get knowledge the meaning and purpose of Darsana, classification of philosophical schools of Indian philosophy. Tarkasangraha of Annambhatta, which is from Nyay vaisesika Darsana etc.
	CC14	Sanskrit composition and communication	This course aims to acquaint students with the ability to express the thoughts and ideas effectively in Sanskrit, ability to communicate through proper media and confidently shore one's views in Sanskrit.
	DSE-3	Theatre and Dramaturgy in Sanskrit	The objective of this curriculum are to identify the beauty of drama and to introduce classical aspects of development of Indian theatre among the students.
	DSE-4	Linguistic and Sanskrit Langage	Linguistic is the scientific study of languages. From linguistics students will learn about many aspects of human language including sounds (Phonetics, phonology) words (Morphology) sentences and meaning The students will also study how languages evalue and how various language is compared. Learning of linguiistic in Sanskrit language will help the students to speak a variety of language. This knowledge can be applied to improve communication between people.

SOCIOLOGY			
SEMESTER	**COURSE CODE**	**COURSE TITLE**	**COURSE OUTCOME (CO)**
1st	**CC1**	Introduction to Sociology-I	Students understood discipline and basic concept in sociology and social structure.
	CC2	Sociology of India- I	Students understood basic knowledge about sociology of India.
2nd	**CC3**	Introduction to Sociology-II	Students are able to understand social thoughts.
	CC4	Sociology of India- II	Students understood social movement of Indian Society.
3rd	**CC5**	Political Sociology	Students are able to understand basic concept of politics, political parties, power, state, civil society, theoretical perspective on power and state and local structure of power.
	CC6	Sociology of Religion	Students are able to understand about the cultural, scientific, functional interpretation of religion. They also able to understand the classical and modern theories of religion and different religious movements in Contemporary society

	CC7	Sociology of Gender	Students are able to understand the basic concepts of feminism, sociological perspectives on gender roles, concept of violence against women and legal measures taken to address the problems
	SEC-1	Case Study	Students understood about Case Study Method elaborately
4th	**CC8**	Economic Sociology	Students are able to understand the nature of economic Sociology.
	CC9	Sociology of Kinship	Students understood introduction to Sociology of Kinship and perspective on family and marriage.
	CC10	Social Stratification	Students are able to understand the basic concept of social stratification
	SEC-2	Cultural Studies	Students are able to understand about concept of cultural studies, problems and evolution of culture. They also understood indigenous cultures, cultures of North East India in special reference to Tripura.
5th	**CC11**	Sociological Thinkers- I	Students are able to understand history of social theory, thoughts of Karl Marx, Max Weber, Emile Durkheim, August Comte, Herbert Spencer
	CC12	Sociological Research Methods-I	Students understood Nature of Scientific Method in Social Science Research

	DSE-1	Urban Sociology	Students are able to understand about Urban Community, different theoretical perspectives of Urban Sociology, Urban issues in context to Indian society and management.
	DSE-2	Agrarian Sociology	Students understood basic concepts of Rural Community, Village, Peasant society, rural culture, religion, rural economy, rural politics, concept of rural leadership and changes in rural leadership and about Panchayat Raj.
6th	**CC13**	Sociological Thinkers-II	Students understood different theories like Functionalism, Structuralism, Conflict theory, Exchange theory, Phenomenology and Ethnomethodology. They also able to understand major arguments and contribution given by sociological thinkers.
	CC14	Social Problems in India	Students can understand meaning, concepts of various social problems encountering by people of India.
	DSE-3	Sociology of Education	Students are able to understand conceptual framework of Sociology of Education, perception of different thinkers on Education.
	DSE-4	Social Change and Development	Students understood basic concepts of social change, theories of social change, different types of social change and problems with special reference to North-East India. They also understood different dimensions of Development and Progress.

STATISTICS			
SEMESTER	**COURSE CODE**	**COURSE TITLE**	**COURSE OUTCOME (CO)**
1st	CC1	Descriptive Statistics & Basic Concepts of Probability	This course covers the basics of descriptive statistics, including measures of central tendency and variability, frequency distributions, and graphical representation of data. We will also learn the basic concepts of probability, such as random events, sample spaces, and probability distributions.
	CC2	Essential Mathematics for Statistics	This course provides a foundation in mathematics necessary for statistics. Topics covered include set theory, algebra, calculus, and linear algebra.
2nd	CC3	Statistical computing using C & R	This course introduces us to the use of programming languages such as C and R for statistical analysis. We will learn how to perform data management, statistical analysis, and data visualization using these languages.
	CC4	Random variable & Probability Distributions	This course covers the concepts of random variables and probability distributions. We will learn about discrete and continuous probability distributions, such as the normal, binomial, and Poisson distributions, and how to calculate probabilities and expected values.
3rd	CC5	Sampling Distributions & Order Statistics	This course introduces us to the concepts of sampling distributions and order statistics. We will learn how to use these concepts to make inferences about population parameters based on sample data.

	CC6	Sample Survey	This course covers the design and implementation of sample surveys, including sampling methods, questionnaire design, and data collection and analysis. This course also focuses on advanced topics such as survey design, estimation, and measurement error.
	CC7	Statistical Inference – I	This course covers the principles of statistical inference, including point and interval estimation, hypothesis testing, and confidence intervals.
	SEC1	Use and development of Software for Statistical Data Analysis	This course focused on the use of statistical software for data analysis provides students with hands-on experience in using statistical software for data analysis and visualization, including data preparation, descriptive statistics, inferential statistics, hypothesis testing, and regression analysis. The course covers the various statistical software programs available and emphasizes the importance of data cleaning and preparation. The program provides students with the skills to apply data analysis techniques to real-world data and communicate the results effectively.
4th	CC8	Linear Programming Problem	This course covers the principles of linear programming, including linear constraints and optimization using linear objectives.
	CC9	Index Number, Demand Analysis and Time Series	This course introduces us to the concepts of index numbers and time series analysis. We will learn how to analyze time series data and use statistical methods to identify trends and patterns.
	CC10	Multivariate Analysis & Stochastic Process	This course covers the concepts of multivariate analysis and stochastic processes. We will learn how to analyze data with multiple variables and use statistical models to understand the relationships between variables.

	SEC2	Database Management System	This course provides students with an understanding of database concepts and the ability to design, implement, and manage databases. The course covers database design and normalization, SQL language, and database security. Students will gain hands-on experience in using database management systems to store, retrieve, and manipulate data and will learn about the different types of databases and their applications. The program provides a solid foundation in database management and prepares students for a career in data management and analysis.
5th	CC11	ANOVA, Design of Experiments, ANCOVA	This course covers the concepts of analysis of variance (ANOVA) and analysis of covariance (ANCOVA), including designs, models, and hypothesis testing.
	CC12	Linear Models & Econometrics	This course covers the concepts of linear models and econometrics, including regression analysis, time series models.
	DSE1	Operations Research	This course covers the principles of operations research, including linear programming, network analysis, and decision analysis.
	DSE2	Demography	This course covers the principles of demography, including population growth, mortality, fertility, migration, and population aging.
6th	CC13	Statistical Quality Control & Psychometry	Statistical Quality Control: This course introduces us to the principles of statistical quality control, including control charts, process capability analysis, and quality improvement methods.

			Psychometry: This course provides students with an understanding of psychometric theory, statistical methods used in psychometrics. Students will gain hands-on experience in the development and validation of psychological tests and the ability to apply psychometric methods in real-world settings.
	CC14	Statistical Inference – II	This course provides students with an understanding of statistical inference, nonparametric methods, and hypothesis testing. The course covers the theory of tests of significance and the ability to choose and apply appropriate statistical tests for different data sets. Students will gain hands-on experience in the application of statistical inference techniques to real-world data and develop the skills to interpret and communicate the results of statistical tests. This course provides a strong foundation in statistical inference and is essential for a successful career in data analysis and decision-making.
	DSE3	Biostatistics	This course introduces you to the application of statistical methods in the field of biology, including the design and analysis of experiments and observational studies.
	DSE4	Research methodology	This course covers the principles of research methodology, including the design and implementation of research projects, data collection, and data analysis.

ZOOLOGY			
SEMESTER	**COURSE CODE**	**COURSE NAME**	**COURSE OUTCOME (COs)**
1st	CC-1	NON-CHORDATES I: PROTISTS TO PSEUDOCOELOMATES	Students will have learning about the basic taxonomy and systematics and classification of Protozoa, Porifera, Cnidaria and Helminth groups. They also will acquire knowledge about the biology of these taxonomic categories as well as about some acoelomate plus pseudocoelomate parasites for their life cycles, epidemiology, origin and evolution of parasitism, role of vectors, parasitoids, host-parasite interactions etc.
	CC-2	PRINCIPLES OF ECOLOGY	Students will understand the various features and aspects of population ecology, community ecology and ecosystem ecology. They will also have the knowledge about environmental biology in details. They will acquire knowledge about various tools and techniques of field biology & ecology. Students will also have the opportunity to visit Zoo, Natural forests Eco Parks as a part of their field visit to understand the subject practically.

2nd	CC-3	NON-CHORDATES II: COELOMATES	Students will be learning about classification of coelomate invertebrates and the structure, function plus biology of these taxonomic categories as well. They will understand about different vector born diseases and the related life cycles, epidemiology, pathology, diagnosis, symptoms and treatments. They will learn the functional anatomy of coelomate organisms.
	CC-4	CELL BIOLOGY	Students will understand the structures, positions and functions of plasma membrane and all cellular organelles in details. They will acquire knowledge about chromosomes and cell divisions, both mitosis and meiosis. They will also know about cell signalling and cancers. They will know the difference between normal and cancerous cell and the process of apoptosis.
3rd	CC-5	DIVERSITY OF CHORDATA	Students will understand the classification, structure, function and biology of chordates of different taxonomic classes. They will also learn some special topics like zoogeography, metamorphosis, and snake bites, migration of birds, and parental care of amphibian, echolocation mechanism of mammals, different breeds of poultry and their management.

	CC-6	ANIMAL PHYSIOLOGY: CONTROLLING AND COORDINATING SYSTEMS	Students will learn about basics of histology and tissue staining. They will also understand the physiology of muscles, nerves, reproductive systems and bone. They will learn details of endocrinology with classification of hormones, their biosynthesis, receptors and mode of molecular actions, physiological function, feedback controls and related disorders.
	CC-7	FUNDAMENTALS OF BIOCHEMISTRY	Students will understand the basic and fundamental biochemistry of carbohydrates, proteins, lipids and nucleic acids. They will also understand the nature and mechanism, and kinetics of enzymes and hormones and their action. Students will also have brief idea of nuclic acids. They will also gather idea of different instruments used in biochemistry.
4th	CC-8	COMPARATIVE ANATOMY OF VERTEBRATES	Students will have understood the structures of different systems such as, integumentary, skeletal, digestive, respiratory, circulatory, urinogenetal, nervous and sensory organs in comparative way among the vertebrate groups. With this course the students will be able to understand the differences in the development of organ systems of vertebrates and their process of evolution.

	CC-9	ANIMAL PHYSIOLOGY: LIFE SUSTAINING SYSTEMS	Students will know the physiology of digestion, respiration, circulation, excretion and adaptation. They will also understand the process of reproduction and the metabolic chemicals which regulates the process of reproduction. They will be able to understand the life sustain forces and the process of evolution of life.
	CC-10	BIOCHEMISTRY OF METABOLIC PROCESSES	Students will understand the whole metabolic process of body and how they are interlinked with each other. Students will understand the metabolism of carbohydrates, lipids and proteins in details. They will also learn about oxidative phosphorylation and redox reactions and ATP synthesis in body and the metabolic intermediates which inhibit its production.
5th	CC-11	GENETICS & MOLECULAR BIOLOGY	Students will acquire knowledge about Mendelism and its Laws. Deviation from Mendel's laws, They will learn different types of autosomal and sex linked traits and Pedigree analysis. Modern concept of gene, Fundamental ideas of DNA replication, transcription, translation, post transcriptional and post translational modifications, gene regulation, Mutation and their types, DNA repair mechanisms They will also know the basics of recombinant DNA technology etc.

5TH	CC-12	IMMUNOLOGY	In this course students will develope knowledge about structures and function of immune cells, immunoglobulins, antigens and their interactions with antibodies. They will know about MHC molecules, cytokines, hyper sensitivity reactions and cellular mode of immunity development. They will know the immune diffusion technique and ELISA, RIA.
	DISCIPLINE SPECIFIC ELECTIVE DSE-I	PARASITOLOGY	● This course is designed to provide students with knowledge concerning biological, epidemiological and ecological aspects of parasites causing diseases to humans. Identify, describe and contrast unicellular parasites and parasitic worms. To describe specific human and non-human parasitic diseases. Prepare and observe live parasitic specimens and test students' knowledge for a particular parasitic infection and how to go for controlling it.
	DISCIPLINE SPECIFIC ELECTIVE DSE-II	ANIMAL BEHAVIOUR AND CHRONOBIOLOGY	Students will know in details about patterns of behaviours, survival strategies, social and cooperative behaviours, design of signals and Chronobiology. They will also know to construct ethograms. They will have detailed idea of biological clocks and their types and the phenomenon of “Jet leg.” Seasonal periodicity in animals and their relation with environmental coordination.

6th	CC-13	DEVELOPMENTAL BIOLOGY	Students will learn the different aspects of early, late and post embryonic developments. They will have the knowledge about implications of developmental biology in various fields, such as in teratogenesis, stem cell biology, in vitro fertilization, cryopreservation, cord blood transfusion etc. Students will also know the techniques of IVF and artificial insemination.
	CC-14	EVOLUTIONARY BIOLOGY	Students will learn different theories of evolution and the process of Cgemogeny and Biogeny and various concepts about origin of Life. Evolution process of human and Horse, extinctions & K-T effect, Preparation of phylogenetic tree. They will also understand few basics of Hardy Weinberg Law of Population dynamics with numerical problems related to population genetics.
	DISCIPLINE SPECIFIC ELECTIVE DSE-III	WILD LIFE CONSERVATION AND MANAGEMENT	Student will be understand the importance of wildlife and its relation with various issues related to biodiversity loss and conservation as well as their IUCN status as per Red Data Book, Wild life protection Acts and conditions and conservation of forests and wildlife. They will also able to use various tools used in field biology. They will get idea to wild life census and interesting success stories in wild life conservation in India like Rhino, Tiger and Asiatic Lion etc.

	DISCIPLINE SPECIFIC ELECTIVE DSE-IV	ENDOCRINOLOGY	Endocrinology involves the evaluation and management of disorders of the body's glands, hormonal secretions, and resultant changes in body metabolic activity. By studding this course students will be able to explain the roles of the endocrine system in maintaining homeostasis, integrating growth and development, responding to endocrine glands. They will also understand different endocrine disorders of human endocrine system and their control mechanisms.