



Programme and Course Outcomes (Bachelors)

DEPARTMENT OF ENGLISH UNDER GRADUATE

PROGRAMME OUTCOMES

English provides a subjective understanding of life, literature and thought. It helps students understand life and its representations, the dynamic and the various forms of life. An English literature program generally aims to equip students with a comprehensive understanding of social structures, relationships, and institutions, as well as the skills to critically analyse social and theoretical phenomena through literature. The program focuses on understanding and conceptualising where students will gain a strong foundation in key literary theories, criticisms, concepts, and perspectives. They will learn how to apply these frameworks to understand various aspects of life and society, including culture, inequality, and power dynamics. Research skills and methodologies where students will develop the ability to design, conduct, and analyse literary research using qualitative and quantitative methods. They will learn to collect, interpret, and present data while upholding ethical research standards. It also aims to equipped students on critically analysis of various issues, policies, and practices. They will learn to question assumptions, identify biases, and use sociological theories to understand complex social phenomena. English programs emphasize clear and effective communication, both in writing and verbal coherence. Students will learn to present ideas, arguments, and research findings coherently to diverse audiences. Students will also gain an understanding of how global, cultural, and historical contexts influence various social issues.

SEMESTER I		COURSE OUTCOME
CORE COURSE	Paper Code: ECC-101 Title: Indian Classical Literature	Some of the course learning outcomes that students of this course are required to demonstrate run thus: <ul style="list-style-type: none">• explain the eco-socio-political-cultural context of the age that produced Indian classical literature from its early beginning till 1100 AD• appreciate the pluralistic and inclusive nature of Indian classical literature and its attributes• historically situate the classical literature and diverse literary cultures from India, mainly from Sanskrit, but also Prakrit and Pali by focusing on major texts in the principal genres• trace the evolution of literary culture(s) in India in its/their contexts, issues of genres, themes and critical cultures• understand, analyze and appreciate various texts with comparative perspectives
	Paper Code: ECC-102 Title: European Classical	Some of the course learning outcomes that students of this course are required to demonstrate run thus:



	Literature	<ul style="list-style-type: none"> historically situate classical European, i.e., Greek and Latin literary cultures and their socio-political-cultural contexts engage with classical literary traditions of Europe from the beginning till the 5th century AD grasp the evolution of the concept of classic and classical in the European literary thinking and its reception over a period of time appreciate classical literature of Europe and pursue their interests in it examine different ways of reading and using literary texts across a wide range of classical authors, genres and periods with comparative perspectives develop ability to pursue research in the field of classics develop academic and practical skills in terms of communication and presentation and also learn about human and literary values of classical period
Ability Enhancement Course	Paper Code: AEC-101 Title: English Language Teaching	<p>Some of the course learning outcomes that students of this course are required to demonstrate run thus:</p> <ul style="list-style-type: none"> identify and classify strategies used by a teacher to teach language demonstrate clear understanding of the syllabus, its structure and development understand the structure of a textbook and its use articulate the reasons for different types of tests the teacher administers demonstrate the ways in which technology can be used for learning language
Skill Enhancement Course	Paper Code: SEC-101 Title: Translation Studies	<p>Some of the course learning outcomes that students of this course are required to demonstrate run thus:</p> <ul style="list-style-type: none"> critically appreciate the process of translation engage with various theoretical positions on Translation think about the politics of translation assess, compare, and review translations translate literary and non-literary texts
SEMESTER II		
CORE COURSE	Paper Code: ECC-203 Title: Indian Writing in English	<p>Some of the course learning outcomes that students of this course are required to demonstrate run thus:</p> <ul style="list-style-type: none"> appreciate the historical trajectory of various genres of IWE from colonial times till the



		<p>present</p> <ul style="list-style-type: none"> critically engage with Indian literary texts written in English in terms of colonialism/postcolonialism, regionalism, and nationalism critically appreciate the creative use of the English language in IWE approach IWE from multiple positions based on historical and social locations
	<p>Paper Code: ECC-204 Title: British Poetry and Drama: 14th to 17th Century</p>	<p>Some of the course learning outcomes that students of this course are required to demonstrate run thus:</p> <ul style="list-style-type: none"> understand the tradition of English literature from 14th to 17th centuries. develop a clear understanding of Renaissance Humanism that provides the basis for the texts suggested engage with the major genres and forms of English literature and develop fundamental skills required for close reading and critical thinking of the texts and concepts appreciate and analyze the poems and plays in the larger socio-political and religious contexts of the time.
<p>Skill Enhancement Course</p>	<p>Paper Code: SEC-202 Title: Creative Writing</p>	<p>Some of the course learning outcomes that students of this course are required to demonstrate run thus:</p> <ul style="list-style-type: none"> recognize creativity in writing and discern the difference between academic/non creative and creative writing develop a thorough knowledge of different aspects of language such as figures of speech, language codes and language registers so that they can both, identify as well as use these; in other words, they must learn that creative writing is as much a craft as an art develop a comprehensive understanding of some specific genres such as fiction, poetry, drama and newspaper writing distinguish between these as well as look at the sub divisions within each genre (such as in poetry, different forms like sonnets, ballads, haiku, ghazal, etc) process their writing for publication and so must have the ability to edit and proofread writing such that it is ready to get into print.



SEMESTER III

<p>CORE COURSE</p>	<p>Paper Code: ECC-305 Title: American Literature</p>	<p>Some of the course learning outcomes that students of this course are required to demonstrate run thus:</p> <ul style="list-style-type: none"> • understand the depth and diversity of American literature, keeping in mind the history and culture of the United States of America from the colonial period to the present (17th century to 21st century) • understand the historical, religious and philosophical contexts of the American spirit in literature; social-cultural-ecological-political contexts may, for example, include the idea of democracy, Millennial Narratives, the Myth of Success, the American Adam, the Myth of the Old South, the Wild West, Melting pot, Multiculturalism, etc. • appreciate the complexity of the origin and reception of American literature, given its European and non-European historical trajectories, particularly in relation to writers of European (Anglo-Saxon, French, Dutch and Hispanic) descent, as well as writers from black and non-European (African, American Indian, Hispanic-American and Asian) writing traditions • critically engage with the complex nature of American society, given its journey from specific religious obligations and their literary transformations (such as Puritanism, Unitarianism, Transcendentalism, etc.) to the growth of anti- or non-Christian sensibilities • critically appreciate the diversity of American literature in the light of regional variations in climate, cultural traits, economic priorities • explore and understand the nature of the relationships of human beings to other human beings and other life forms in relation to representative literary texts in various genres • relate the African American experience in America (both ante-bellum and postbellum) to issues of exclusion in societies relevant to their learning experience • analyze the American mind from global and Indian perspectives and situate the American in the contemporary world
	<p>Paper Code: ECC-306 Title: British Poetry and Drama – 17th and 18th</p>	<p>Some of the course learning outcomes that students of this course are required to demonstrate run thus:</p> <ul style="list-style-type: none"> • identify the major characteristics of the Comedy



	<p>Century</p>	<p>of Manners and Mock-Heroic poetry</p> <ul style="list-style-type: none"> • demonstrate in-depth knowledge and understanding of the religious, socio-intellectual and cultural thoughts of the 17th and 18th centuries • examine critically keys themes in representative texts of the period, including Sin, Transgression, Love, Pride, revenge, sexuality, human follies, among others • show their appreciation of texts in terms of plot-construction, socio-cultural contexts and genre of poetry and drama • analyze literary devices forms and techniques in order to appreciate and interpret the texts
	<p>Paper Code: ECC-307 Title: British Literature-18th Century</p>	<p>Some of the course learning outcomes that students of this course are required to demonstrate run thus:</p> <ul style="list-style-type: none"> • explain and analyze the rise of the critical mind • trace the development of Restoration Comedy and anti-sentimental drama • examine and analyze the form and function of satire in the eighteenth century • appreciate and analyze the formal variations of Classicism • map the relationship between the formal and the political in the literature of the neoclassical period
<p>Generic Elective Course</p>	<p>Paper Code: GEC-301 Title: Introduction to Literature</p>	<p>Some of the learning outcomes of the course that learners are required to demonstrate run thus:</p> <ul style="list-style-type: none"> • Understanding of issues like literature, literariness, literary values and basic literary concepts • have a basic understanding of development of English literature in terms of various movements • engage with the genres and forms of English literature and develop fundamental skills required for close reading and critical thinking of the texts and concepts • appreciate and analyse the select literary poems and plays in the larger socio-cultural contexts of the time • develop skills of critical analysis and interpretation of selected poems in order to understand the theme, language, tone and style, and elements of prosody



SEMESTER IV		
CORE COURSE	Paper Code: ECC-408 Title: Literary Criticism	<p>Some of the course learning outcomes that students of this course are required to demonstrate run thus:</p> <ul style="list-style-type: none"> • understand the historical and philosophical contexts that led to the development of literary criticism and its practice in different traditions and periods • learners will be able to understand fundamental literary and critical concepts and underlying distinctions amongst them (e.g., difference between literary criticism and literary theory) • learners will be able to grasp a wide range of literary philosophers and critics whose works had informed and shaped the discourse of literary theory • learners will have knowledge about major, critical movements and critics in various critical traditions – Indian(schools of Rasa, Alamkar, Riti, Dhvani, Vakroti, Auchitya) and Western (Greek, Roman, English, German, Russian and French) • learners will be able to identify theoretical and critical concepts with critics/texts/movements with which they are associated and understand them in their contexts • learners will be able to apply various theoretical frameworks and concepts to literary and cultural texts • learners will be able to evaluate and analyze strengths and limitations of critical/theoretical frameworks and arguments • learners will be able to strengthen and deepen their interpretative skills
	Paper Code: ECC-409 Title: British Romantic Literature	<p>Some of the course learning outcomes that students of this course are required to demonstrate run thus:</p> <ul style="list-style-type: none"> • understand Romanticism as a concept in relation to ancillary concepts like Classicism • understand the Romantic period in English literature in terms of its social, philosophical, intellectual, literary backgrounds including German and French influences • analyze and understand the main characteristics of Romanticism • appreciate the canonical and representative poems and prose of the writers of the Romantic period. • develop skills of critical analysis and



		<p>interpretation of selected poems in order to understand the theme, language, style, and elements of prosody.</p> <ul style="list-style-type: none"> • appreciate and analyze the sensibility of the British Romantic period: common man, equality, freedom, sense of community and fraternity • relate Romantic literary texts to other forms of expression such as painting, for instance.
	<p>Paper Code: ECC-410 Title: British Literature-19th Century</p>	<p>Some of the course learning outcomes that students of this course are required to demonstrate run thus:</p> <ul style="list-style-type: none"> • identify and analyze the socio-economic-political contexts that inform the literature of the period • comment on the historical and political awareness of literary texts as reflected in the transition from nature to culture across various genres • understand the conflict between self and society in different literary genres of the period • link the rise of the novel to the expansion of Colonialism and Capitalism • understand the transition from Romantic to Victorian in literature and culture • link the Victorian temper to political contexts in English colonies • link the changes in the English countryside to changes brought about in similar settings in India
<p>Generic Elective Course</p>	<p>Paper Code: GEC-402 Title: Language and Linguistics (or) Text and Performance</p>	<p>Some of the course learning outcomes that students of this course are required to demonstrate run thus:</p> <ul style="list-style-type: none"> • recognize/understand the structure and various parts of the language • understand the existence of language in the form of different dialects based on a set of established factors • identify the various functions a language performs and the roles assigned to it • understand that all languages behave alike and develop a tolerance for other languages • understand that making errors is a process of learning and not hesitate to use language for the fear of making errors (or) • Some of the course learning outcomes that students of this course are required to demonstrate run thus: • distinguish between a dramatic text and a



		<p>performance text</p> <ul style="list-style-type: none"> • appreciate the evolution of drama in the West and in India in terms of both, form and content, from tradition to modernity, as well as have a thorough knowledge of different theatre styles in India and the West • to appreciate the difference between drama and other genres • develop a comprehensive understanding of the process of performance and the entire paraphernalia involved from theatrical space and lights/sound/costume to the use of voice and body • learn a wide variety of skills from acting and directing to script writing, costume designing, prop making and technical skills like sound and light as well as production. • display their knowledge of different aspects of text and performance through their production and not just through theoretical knowledge.
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SEMESTER V

<p>CORE COURSE</p>	<p>Paper Code: ECC-511 Title: Literary Theory</p>	<p>Some of the course learning outcomes that students of this course are required to demonstrate run thus:</p> <ul style="list-style-type: none"> • have a historical overview of major literary theorists, particularly of the 20th century • show an understanding of historical and philosophical contexts that led to the development of literary theory and its practices • develop awareness of various literary theories and the way they enrich and change our thinking about language, literature and society • historically situate literary theorists whose works had informed and shaped various literary theoretical discourses • identify theoretical concepts with theorists and movements with which they are associated with and in the process, understand their contexts • apply various theoretical frameworks and concepts to literary and cultural texts • evaluate and analyze strengths and limitations of theoretical frameworks and arguments • sharpen interpretative skills in the light of various theoretical frameworks
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	<p>Paper Code: ECC-512</p> <p>Title: British Literature-The Early 20th Century</p>	<p>Some of the course learning outcomes that students of this course are required to demonstrate run thus:</p> <ul style="list-style-type: none"> • trace the history of modernism in the socio-cultural and intellectual contexts of late nineteenth century and early twentieth century Europe • link and distinguish between modernity and modernism • explain the links between developments in science and experiments in literature • explain the history of early twentieth-century modernism in the light of stream of consciousness, Jungian and Freudian ideas, Psychoanalysis, Imagism, Cubism, Vorticism • identify and analyze the use and modernist technique in different genres in early twentieth century British literature • trace the history of the self and subjectivity in literature in the light of colonial consciousness • explain and analyze the idea of from in modernist literary texts from across major genres
<p>Discipline Specific Elective</p>	<p>Paper Code: DSE-501</p> <p>Title: Modern Indian Writing in English Translation (or) Travel Writing</p>	<p>Some of the course learning outcomes that students of this course are required to demonstrate run thus:</p> <ul style="list-style-type: none"> • appreciate the diversity of modern Indian literatures and the similarities between them • understand and creatively engage with the notion of nation and nationalism • appreciate the impact of literary movements on various Indian literatures • critically engage with significant social issues like caste and gender • understand the historical trajectories of Indian literatures <p>(or)</p> <p>Some of the course learning outcomes that students of this course are required to demonstrate run thus:</p> <ul style="list-style-type: none"> • map the social-historical-political-economic contexts of Travel Writing from regional, national and global perspectives • explain the origin and reception of Travel Writing in chosen locations • appreciate and analyze the relationship of Travel Writing to colonialism • see the link between Travel Writing and history writing: Travel Writing as an alternative history or supplement to historical writing • see the link between travel writing and translation • analyze travel writing in relation to colonial and postcolonial positions • appreciate the role of travel in shaping selfhood and otherness and relate the growth of Travel Writing to regional national and global identities



		<ul style="list-style-type: none"> critically engage with the accounts of places visited by foreigners and how their impressions change local perspectives of the places
Generic Elective Course	Paper Code: GEC-503 Title: Language and Indian Literature	<p>Some of the course learning outcomes that students of this course are required to demonstrate run thus:</p> <ul style="list-style-type: none"> see literature as a fine form of expression. use literature for analysis to understand the use of language see language as a major source of transmitting culture show the understanding of literature in the form of extrapolation (see the relevance of a story, poem, play etc in their own lives)
SEMESTER VI		
CORE COURSE	Paper Code:ECC-613 Title: Modern European Drama	<p>Some of the course learning outcomes that students of this course are required to demonstrate run thus:</p> <ul style="list-style-type: none"> understand the role of theatre and drama in the introduction and shaping of modernity understand and engage with concepts like realism, naturalism, symbolism, expressionism, the Avant Garde, the epic theatre, the theatre of the absurd, etc. understand how meaning is created in theatre and be able to write about innovations introduced into theatrical practice in the late nineteenth and the twentieth century
	Paper Code: ECC-614 Title: Postcolonial Literature	<p>Some of the course learning outcomes that students of this course are required to demonstrate run thus:</p> <ul style="list-style-type: none"> understand the social-historical-political-economic contexts of colonialism and postcolonialism in India and other countries affected by colonial rule understand the scope of postcolonial literatures in India and elsewhere, primarily as a response to the long shadow of colonialism, not just of colonial occupation see through a corpus of representative postcolonial texts from different colonial locations: the effects of colonial rule on the language, culture, economy and habitat of specific groups of people affected by it appreciate and analyze the growing spectres of inequality arising out of colonial occupation and the role played by postcolonial literatures to resist it in India and similar locations critically engage with issues of racism and imperialism during and after colonial occupation appreciate the changing role and status of English in postcolonial literatures link colonialism to modernity
Discipline Specific	Paper Code: DSE-602 Title: British Literature:	Some of the course learning outcomes that students of this course are required to demonstrate run thus:



<p>Elective</p>	<p>Post-World War II (or) Autobiography</p>	<ul style="list-style-type: none"> • understand the social-historical-political-economic contexts of Post-World War II British Literature • understand the relationship between World war II and the end of colonialism • identify the social-historical-political changes in England after World War II • see through a corpus of representative texts the rise of multiculturalism in England in the wake of migrations of people from colonial territories • grasp the changing role of English in the new world order • critically analyze and link changes in social norms to new literary forms • engage with the idea of the postmodern and the rise of the postmodernist aesthetics • appreciate the importance of location in understanding the self and the other <p>(or)</p> <p>Some of the course learning outcomes that students of this course are required to demonstrate run thus:</p> <ul style="list-style-type: none"> • demonstrate a familiarity with kinds of writing which seek to represent and make sense of the experiences of the individual. • understand the relationship between self and history, truth, claims and fiction in private and public spheres. • explain the working of memory, politics of memory and its role in constructing identity. • explain and analyze how life writing provides alternatives to existing ways of writing history. • examine the status of life writing as a literary form and the history of its reception • appreciate the emergence of life writing non-western context.
<p>Generic Elective Course</p>	<p>Paper Code: GEC-604 Title: American and British Literature (or) Media and Mass Communication Skills</p>	<p>Some of the course learning outcomes that students of this course are required to demonstrate run thus:</p> <ul style="list-style-type: none"> • understand the depth and diversity of American literature, keeping in mind the history and culture of the United States of America from the colonial period to the present (17th century to 21st century) • critically engage with the complex nature of American society, given its journey from specific religious obligations and their literary transformations (such as Puritanism, Unitarianism, Transcendentalism, etc.) to the growth of anti- or non-Christian sensibilities • critically appreciate the diversity of American literature in the light of regional variations in climate, cultural traits, economic priorities • explore and understand the nature of the



		<p>relationships of human beings to other human beings and other life forms in relation to representative literary texts in various genres</p> <ul style="list-style-type: none"> • analyze the American mind from global and Indian perspectives and situate the American in the contemporary world • engage with the major genres and forms of English literature and develop fundamental skills required for close reading and critical thinking of the texts and concepts • appreciate and analyze the poems and plays in the larger socio-political and religious contexts of the time. <p>(or)</p> <p>Some of the course learning outcomes that students of this course are required to demonstrate run thus:</p> <ul style="list-style-type: none"> • develop the professional ability to communicate information clearly and effectively in all kinds of environment and contexts. • demonstrate practical skills of various types of media writing, reviews, reports, programmes and discussions. • demonstrate their familiarity with the new media, its techniques, practices of social media and hypermedia. • critically analyze the ways in which the media reflects, represents and influences the contemporary world. • identify avenues for a career in print and electronic media.
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SEMESTER VII

CORE COURSE	Paper Code: ECC-715 Title: Popular Literature	<p>Some of the course learning outcomes that students of this course are required to demonstrate run thus:</p> <ul style="list-style-type: none"> • trace the early history of print culture in England and the emergence of genre fiction and best sellers • engage with debates on high and low culture, canonical and non-canonical literature • articulate the characteristics of various genres of non-literary fiction • investigate the role of popular fiction in the literary polysystem of various linguistic cultures • demonstrate how popular literature belongs to its time • Use various methods of literary analysis to interpret popular literature
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	<p>Paper Code: ECC-716 Title: Women's Writing</p>	<p>Some of the course learning outcomes that students of this course are required to demonstrate run thus:</p> <ul style="list-style-type: none"> • recognise the importance of gender specificity in literature • understand and appreciate the representation of female experience in literature • explain the difference between the feminine and the feminist as opposed to the female • examine and appreciate the role played by socio-cultural-economic contexts in defining woman • link the status of woman to social discrimination and social change • draw a location specific trajectory of female bonding or empowerment • to understand the complexity of social and biological constructions of manhood and womanhood • to examine the relationship of women to work and production
<p>Discipline Specific Elective</p>	<p>Paper Code: DSE-703 Title: Literature and Cinema (or) Science Fiction and Detective Literature</p>	<p>Some of the course learning outcomes that students of this course are required to demonstrate run thus:</p> <ul style="list-style-type: none"> • demonstrate a systematic and historically-grounded knowledge of literature and cinema as expressive arts • identify and illustrate the distinction between literary and cinematic arts of storytelling • identify and describe the difference between cinematic and literary images • examine different theories of adaptation and link them to contexts of expression and reception • organize different sets of activities to identify and make use of skills that distinguish the medium of cinema from that of literature • present a coherent view of the relationship between written and cinematic texts • communicate the role of location in adaptation (or) <p>Some of the course learning outcomes that students of this course are required to demonstrate run thus:</p> <ul style="list-style-type: none"> • write critically about the two genres: Science Fiction, and Detective Literature • engage with the philosophical and psychological and social issues that are an intrinsic part to the two genres • think through the concept of progress, and the role of technology in our life and the interaction between technology and human behaviour • engage with the social and historical construction of crime • analyze individual or multiple texts in the two genres in terms of key concepts including genre, implied audience, plot construction, linguistic



		texture, authorial identity, publication context, and sociocultural context
Generic Elective Course	Paper Code: GEC-705 Title: New Literatures in English (or) American Literature	<p>Some of the course learning outcomes that learners of this course, New Literatures in English, are required to demonstrate runs thus:</p> <ul style="list-style-type: none"> • show familiarity with the emergent body of literature being produced by writers from South Africa, Caribbean, South Asia, Australia and Canada and its sociopolitical- cultural contexts • demonstrate ability to show an understanding of cultural exchange processes as represented through literature will have knowledge about the prominent concepts in this body of literature. • appreciate new works in literature and pursue their interests in it • examine different ways of reading and using literary texts across wide range of classical authors, genres and periods with comparative perspectives • develop ability to pursue research in the field of new literatures in English <p>(or)</p> <p>Some of the course learning outcomes that students of this course are required to demonstrate run thus:</p> <ul style="list-style-type: none"> • understand the depth and diversity of American literature, keeping in mind the history and culture of the United States of America from the colonial period to the present (17th century to 21st century) • understand the historical, religious and philosophical contexts of the American spirit in literature; social-cultural-ecological-political contexts may, for example, include the idea of democracy, Millennial Narratives, the Myth of Success, the American Adam, the Myth of the Old South, the Wild West, Melting pot, Multiculturalism, etc. • appreciate the complexity of the origin and reception of American literature, given its European and non-European historical trajectories, particularly in relation to writers of European (Anglo-Saxon, French, Dutch and Hispanic) descent, as well as writers from black and non-European (African, American Indian, Hispanic-American and Asian) writing traditions • critically engage with the complex nature of American society, given its journey from specific religious obligations and their literary transformations (such as Puritanism, Unitarianism, Transcendentalism, etc.) to the growth of anti- or non-Christian sensibilities • critically appreciate the diversity of American literature in the light of regional variations in



		<p>climate, cultural traits, economic priorities</p> <ul style="list-style-type: none"> • explore and understand the nature of the relationships of human beings to other human beings and other life forms in relation to representative literary texts in various genres • relate the African American experience in America (both ante-bellum and postbellum) to issues of exclusion in societies relevant to their learning experience • analyze the American mind from global and Indian perspectives and situate the American in the contemporary world
SEMESTER VIII		
CORE COURSE	Paper Code: ECC-817 Title: Research Methodology	Some of the course learning outcomes that students of this course are required to demonstrate run thus: <ul style="list-style-type: none"> • Develop a simple questionnaire to elicit specific information. • Collect data based on a survey and arrive at inferences using a small sample • Discuss and draft a plan for carrying out a piece of work systematically • Refer to authentic sources of information and document the same properly. • Provide proper explanation for technical terms in simple language.
	Paper Code: ECC-818 Title: World Literature	Some of the course learning outcomes that students of this course are required to demonstrate run thus: <ul style="list-style-type: none"> • explain the concept of World Literature and its evolution in relation to other related concepts e.g. national literature, general literature, comparative literature and Vishwa Sahitya. • appreciate the connectedness and diversity of human experiences and literary responses to them in different parts of the world. • analyze and appreciate literary texts from different parts of the world and receive them in the light of one's own literary traditions. • analyze and interpret literary texts in their contexts and locate them.
Discipline Specific Elective	Paper Code: DSE-804 Title: Dissertation (or) Research Internship	<ul style="list-style-type: none"> • Under the supervision of a department teacher • About 100 pages
Generic Elective Course	Paper Code: GEC-806 Title: Contemporary India – Women and Empowerment (or) British Romantic Literature	<ul style="list-style-type: none"> • the evolution of the society depends on social actions and interactions performed by the individuals / actors • the course will study the different aspects of the functioning of the society • particular emphasis will be given on the role of women in the society and the significance of stages of women's movement • special attention will also be given to the importance of environment in the society



		<p>(or)</p> <p>Some of the course learning outcomes that students of this course are required to demonstrate run thus:</p> <ul style="list-style-type: none">• understand Romanticism as a concept in relation to ancillary concepts like Classicism• understand the Romantic period in English literature in terms of its social, philosophical, intellectual, literary backgrounds including German and French influences• analyze and understand the main characteristics of Romanticism• appreciate the canonical and representative poems and prose of the writers of the Romantic period.• develop skills of critical analysis and interpretation of selected poems in order to understand the theme, language, style, and elements of prosody.• appreciate and analyze the sensibility of the British Romantic period: common man, equality, freedom, sense of community and fraternity• relate Romantic literary texts to other forms of expression such as painting, for instance.
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DEPARTMENT OF GEOGRAPHY UNDER GRADUATE

PROGRAMME OUTCOMES

Programme outcome (POs) for a Geography program are the skills and knowledge that students are expected to gain and demonstrate upon completion of the program. Some examples of program for Geography include:

Knowledge: Students should be able to demonstrate knowledge of the physical and cultural features of the Earth, including the Earth's interior, plate tectonics, and the composition of the atmosphere and hydrosphere. They should also be able to differentiate between minerals and rocks, weather and climate and basic industries.

Skills: Students should be able to carry out surveying, make maps and use statistical and cartographical methods to solve geographical problems. They should also be able to collect primary and secondary data, apply statistical formulas to analyze data and use cartographic techniques with software like MS excel.

Application: Students should be able to identify and assess how geographic concepts apply in the workplace and in everyday life to solve real world problems. They should also be able to communicate geographic data, theories, philosophies and concepts in oral, written and visual forms.

Course Outcome:

Semester I		
Core	Course Code: GG 501 Course Core: 1 Foundations of Geography	<ol style="list-style-type: none"> 1. Meaning, scope, branches, and approaches of Geography; Emergence of Geography as a subject; Importance of Geography; Place of Geography in the classification of science; Geography and other disciplines. 2. The Human Dimension in Geography: Man and environment; Society, culture, and civilization. 3. Modern concepts in Geography; Study of Geography in India; Career opportunities for geographers.
	Course Code: GG501 (Practical) Course Core: 1 Simple Astronomical Calculation and Scale	<ol style="list-style-type: none"> 1. Measurement of shape and size of the Earth with past and present development. 2. Calculation of radius of the Earth; 3. Calculation of altitudes and declination of stars; 4. Determination of time and calculation of local time using Sun Dial; 5. Calculation of time of sunrise and sunset.
	Course Code: GG502 Course Core: 2 Fundamentals of Physical Geography	<ol style="list-style-type: none"> 1. Meaning, scope, and components of physical geography; Physical geography and other disciplines; 2. Elements of weather and climate; Composition and structure of the atmosphere; Insolation; Planetary wind; Rainfall; Tropical cyclones; Hydrological cycle
	Course Code: GG502 (Practical) Course Core: 2 Relief Mapping, Mineral and Rock Identification and Geological Map Interpretation	Method of Showing Relief: Hachure, hill shading, contour, form line, and layer tints; Drawing of contours and their cross section of slope elements, and fluvial, wind, karst.



	and Field visit	
SEC	Course Code: GG 521 Course Sec:1 Cartographic Techniques and Computer Application in Geography	Meaning, scope, and development of cartography; Present status of cartography, cartographic use of the sphere, ellipsoid, and geoid; Geographical coordinates.
Semester II		
Core	Course Code: GG503 Course: Core 3 Fundamentals of Human Geography	1. Meaning, scope, and branches of human Geography; Approaches to the study of human Geography. 2. Human Adaptation to Environment: Cold region – Eskimos, Hot region – Bushman, Plateau region – Gonds, Mountain region – Gujjars
	Course Code: GG503 (Practical) Course: Core 3 Distribution Mapping, Human Development and Field Visit	Preparation of Distribution Maps: Naming method showing races, languages, and religions of India or Manipur State; Meaning and types of graph and diagram; Preparation of simple bar diagram and pie diagram showing economic data.
	Course Code: GG504 Course: Core 4 Fundamentals of Remote Sensing, Photogrammetry and GPS	Definition, types, development, advantages, and limitations of remote sensing; Principles of remote sensing and remote sensing sensors; Remote sensing platforms; Capturing and processing of drone image.
	Course Code: GG 504 Course: Core 4 Remote Sensing, GIS, Photogrammetry, GPS and Drone Practical	Remote Sensing and GIS: Downloading of remote sensing images from online platforms (like Bhuvan, USGS, ASF, Copernicus etc.). Land use classification (Supervised and Un-supervised) using downloaded images and GIS packages. Mapping from satellite imagery – land use and land cover.
SEC	Course Code: GG 522 Course: SEC 2 Geographical Information System	1. Geographical Information System (GIS): Definition, components, and historical development; Definition and need of Land Information System. (LIS). 2. Advantages and disadvantages of GIS; Representation of geographical data; Converting the geospatial data.
Semester III		
Core Core Core Core Core	Course Code: GG601 Course: Core 5 Geomorphology	Definition, scope, and branches of geomorphology; Evolution of geomorphic thought; Geomorphic systems and models; Approaches and techniques of geomorphic analysis; Concepts of geomorphology; and Relationships of geomorphology with other branches of Earth Sciences.
	Course Code: GG601 (Practical) Course: Core 5 Geomorphological Mapping and Field Visit	Generating data from topo sheet of 1:50,000 and preparation of profiles(Superimposed, projected, composite, and serial), average slope map, hypsometric curve, and area height curve.
	Course: Core – 6 Course Code: GG 602	Meaning, scope, and branches of climatology; weather and climate; origin, composition and



	Course: Core 6 Climatology and Hydrology	structure of atmosphere; Atmospheric hazard; Insolation; Heat budget; Heat transfer – Temperature scales, latent heat, conduction, convection, and radiation; Atmosphere of Mars Planet.
	Course Code: GG602 (Practical) Course: Core 6 Climatological Diagrams, Hydrological Analysis and Field Visit	Drawing of hythergraph, climograph, wind rose diagram, rainfall dispersion diagram, columnar diagram, and line & bar diagram representing temperature and rainfall; Interpretation of weather chart of Indian Meteorological Organization for July and January; Measurement of rainfall, air pressure, humidity, temperature, wind speed, and wind direction.
	Course Code: GG603 Section Course Core 7 Oceanography and Marine Biodiversity & Ecology	<ol style="list-style-type: none"> 1. Meaning, scope, branches, and growth of oceanography; Oceanography as a branch of science and geography; Origin and morphology of ocean basins. 2. Constituent, temperature, density, salinity, and current of ocean water; Atmosphere and sea interaction. 3. Meaning and concept of marine biodiversity; Ocean habitats; Marine organisms; Marine biological community.
	Course Code: GG 603 Course: GEC 1 Climate Change Vulnerability and Adaptation	<ol style="list-style-type: none"> 1. Climate Change: Understanding climate change; Greenhouse gasses and global warming; Global climatic assessment –IPCC. 2. 2) Climate Change and Vulnerability: Physical vulnerability, economic vulnerability, and social vulnerability. 3. Impact of Climate Change: Agriculture and water, flora and fauna, human health

SEMESTER IV

CORE COURSE	Core 8 Course Code: GG604 Soil Geography and Biogeography	<ol style="list-style-type: none"> 1. This paper will introduce students to the basic concepts of soil geography and biogeography which will enhance the conceptual learning and understanding of the basic concepts used in Geography. 2. Students will also be able to: <ul style="list-style-type: none"> • Define paedology and soil geography. • Explain the importance of soil in the environment and human life. • Describe the mineral, organic, and biological components of soil. • Explain the role of each component in soil formation and function. • Understand the concepts of soil colour, texture, and structure. • Explain how these properties influence soil fertility and productivity. • Describe the factors affecting soil
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		<p>formation (climate, parent material, organisms, topography, time).</p> <ul style="list-style-type: none">• Explain the process of soil profile development and the characteristics of different soil horizons.• Understand the principles of soil classification systems (e.g., USDA Soil Taxonomy).• Interpret soil maps and identify the distribution of different soil types.• Understand the importance of soil aeration and temperature for plant growth.• Explain the factors affecting soil aeration and temperature.• Describe the concepts of soil acidity and alkalinity.• Explain the impact of soil pH on plant growth and nutrient availability.• Define soil fertility and soil quality.• Discuss the factors affecting soil fertility and quality.• Identify the types of soil erosion (water erosion, wind erosion).• Explain the factors contributing to soil erosion.• Discuss the techniques for preventing and controlling soil erosion.• Understand the principles of remote sensing and its application in soil science.• Interpret satellite images to map soil properties and monitor soil degradation.• Explain the concept of biogeography.• Identify the different branches of biogeography (historical, ecological, and phytogeography, zoogeography).• Discuss the contributions of key figures in the field of biogeography.• Trace the evolution of biogeographical thought.• Understand the role of field studies, laboratory analysis, and remote sensing in biogeographical research.• Explain the use of geographic
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		<p>information systems (GIS) in biogeography.</p> <ul style="list-style-type: none">• Identify the relationships between biogeography and other sciences (ecology, geology, climatology).• Discuss how biogeography contributes to our understanding of biodiversity and conservation.• Define ecology and ecosystem.• Explain the components of an ecosystem and their interactions.• Describe the concept of biomes and their characteristics.• Understand the processes of evolution, adaptation, and speciation.• Explain the mechanisms of dispersal and migration of organisms.• Discuss the factors influencing the distribution of plant and animal communities.• Classify the Earth into biogeographical regions based on climate, flora, and fauna.• Analyse the unique characteristics of each biogeographical region.• Understand the concept of biodiversity.• Explain the three levels of biodiversity (genetic, species, and ecosystem).• Define biodiversity hotspots and their significance.• Discuss the threats to biodiversity hotspots.• Understand the importance of biodiversity conservation.• Discuss the various methods of biodiversity conservation (in-situ and ex-situ).• Identify the major forest types and wildlife habitats in India.• Discuss the challenges and opportunities in forest and wildlife conservation in India.• Understand the use of remote sensing in monitoring biodiversity.• Interpret satellite images to assess habitat loss and fragmentation.
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	<p>Core 8 Course Code: GG604 Paper: Soil Analysis & Identification and Biogeographical Measurement & Observation</p>	<p>1. To introduce students to the practical analysis of soil properties, and also students will gain in hand knowledge on:</p> <ul style="list-style-type: none"> • Measurement of soil pH, temperature, and moisture content using appropriate tools. • Identify and describe the physical structure of soil profiles. • Determine soil texture using the feel method and particle size analysis. • Interpret soil maps derived from aerial photographs and satellite imagery. • Prepare soil samples for laboratory analysis. • Use laboratory techniques to analyse soil properties. • Assess soil quality and fertility for agricultural purposes. • Identify potential soil degradation issues and propose solutions. • Use soil maps to make informed land-use decisions. • Understand biodiversity concepts • Identify and classify plant species • Analyse ecosystem structure and function • Develop field observation and data collection skills • Communicate scientific findings
	<p>Core 9 Course Code: GG605 Environmental Geography and Climate Change</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Define environmental geography and its scope. • Explain the relationship between environmental geography and other sciences (e.g., geology, biology, climatology). • Understand fundamental environmental concepts like ecosystem, biosphere, and environmental degradation. • Analyse the components of the environment (biotic, abiotic, and cultural). • Describe the historical relationship between humans and the environment. • Explain how human activities influence environmental processes (e.g.,



		<p>hydrological cycle, nutrient cycles).</p> <ul style="list-style-type: none">• Understand the causes and consequences of soil erosion and sedimentation.• Analyse the various types of environmental degradation (e.g., deforestation, water pollution, air pollution).• Evaluate the impact of pollution on human health and ecosystems.• Explain the principles of environmental planning and management.• Analyse the role of government policies and international agreements in environmental protection.• Assess the environmental challenges faced by India, including pollution and degradation.• Understand the ethical dimensions of environmental issues.• Evaluate the effectiveness of environmental legislation in India.• Apply remote sensing techniques to monitor environmental changes.• Define global warming and climate change.• Identify the primary greenhouse gases and their sources.• Understand the greenhouse effect and its impact on global temperatures.• Analyse the evidence for climate change, including temperature records, sea-level rise, and glacier retreat.• Discuss the various theories of climate change, including natural and anthropogenic factors.• Explore past climate variations and their causes.• Assess the impacts of climate change on various systems (e.g., ecosystems, agriculture, water resources).• Evaluate the potential future scenarios of climate change.• Understand the role of the United Nations Framework Convention on Climate Change (UNFCCC) in
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		<p>addressing climate change.</p> <ul style="list-style-type: none"> Analyse India's national climate action plan and its implications. Evaluate the role of local governments in mitigating and adapting to climate change.
	<p>Core 9 Course Code: GG605 Environmental Geography Practical, Climate Change Analysis and Field Visit</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> Explain the principles of various methods used to measure environmental parameters (e.g., pH, temperature, humidity). Identify the appropriate techniques for monitoring air quality (e.g., air sampling, gas chromatography). Describe the methods used for water quality analysis (e.g., chemical tests, biological indicators). Collect air, water, and noise samples using standard procedures. Analyse samples in the laboratory to determine pollutant concentrations. Interpret data and draw conclusions about environmental quality. Explain the concept of proxy data and its use in climate reconstruction. Identify various proxy climatic indicators (e.g., tree rings, ice cores, pollen analysis). Analyse past climate trends using statistical methods and graphical representations. Identify environmentally degraded areas in the local region. Collect data on the extent of degradation and its causes. Analyse the impact of degradation on the environment and human society.
	<p>Core 10 Course Code: GG606 Disaster Management</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> Define disaster and hazard. Understand the concept of risk and vulnerability. Classify disasters based on various criteria (e.g., natural, human-made). Analyse the factors contributing to disaster risk. Explain the concept of disaster management.



		<ul style="list-style-type: none"> • Identify the phases of disaster management (mitigation, preparedness, response, recovery). • Discuss the various methods and approaches used in disaster management. • Analyse the role of early warning systems in disaster management. • Understand the causes, impacts, and management strategies for floods, droughts, landslides, hailstorms, earthquakes, tsunamis, and cyclones. • Analyse the specific challenges posed by these disasters in India. • Evaluate the effectiveness of disaster management policies and programs in India. • Identify the types of man-made disasters (e.g., industrial accidents, terrorism, nuclear accidents). • Analyse the causes, impacts, and spatial distribution of man-made disasters. • Understand the role of technology in mapping and assessing the risks of man-made disasters. • Explain the importance of disaster mitigation and preparedness. • Discuss the role of early warning systems and emergency response plans. • Analyse the legal framework for disaster management in India. • Understand the role of the National Disaster Management Authority (NDMA) and National Institute of Disaster Management (NIDM). • Evaluate the contribution of indigenous knowledge and community-based approaches to disaster management. • Identify the key do's and don'ts during and after a disaster.
	<p>Course: GEC – 2 Course Code: GG 632 Geospatial Information Technology</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Define geospatial technology and its components (GIS, GPS, remote sensing). • Trace the historical development of geospatial technology.



		<ul style="list-style-type: none"> • Understand the key concepts of geographic information systems (GIS). • Explain the role of geospatial technology in various fields. • Identify various sources of geospatial data (primary and secondary). • Understand the concepts of geospatial data registration and projection. • Explain different data structures used in GIS (raster, vector). • Learn data interpolation techniques for creating continuous surfaces. • Apply spatial modelling techniques to analyse geographic patterns and processes. • Install and configure GIS software. • Acquire and import geospatial data into GIS software. • Create and edit maps using GIS tools. • Perform spatial analysis tasks (e.g., buffering, overlay, network analysis). • Generate thematic maps and reports. • Understand the concept of spatial queries and data retrieval. • Explain topological relationships and their application in GIS. • Analyse network data (e.g., transportation networks, utility networks). • Perform overlay analysis to identify spatial patterns and relationships. • Create various types of map outputs (hardcopy and digital). • Identify the role of geospatial technology in sustainable development. • Apply GIS to address environmental issues (e.g., deforestation, pollution, climate change). • Use GIS for urban planning and management. • Analyse spatial patterns of socio-economic indicators. • Develop decision-support systems using GIS.
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SEMESTER V

CORE

Course: Core – 11 Course Code:

Students will be able to:



PAPER	GG 701 Economic and Resource Geography	<ul style="list-style-type: none"> • Define economic geography and understand its relationship with economics. • Identify the key approaches used in economic geography (e.g., spatial analysis, quantitative methods). • Analyse recent trends in economic geography, such as globalization and sustainable development. • Define and classify resources based on their origin, renewability, and distribution. • Understand the concept of resource conservation and its importance for sustainable development. • Evaluate the strategies for conserving forests, soil, water, and energy resources. • Analyse the geographical distribution of major agricultural and mineral resources. • Evaluate the factors influencing the production of key agricultural and mineral commodities. • Discuss the environmental and social impacts of resource extraction and utilization. • Understand the factors influencing industrial location and development. • Analyse the spatial patterns of industrial regions at global and regional scales. • Evaluate the impact of government policies on industrial development, such as Special Economic Zones and technology parks. • Analyse the global patterns of transportation and their impact on economic development. • Understand the principles of international trade and the role of trade blocs. • Evaluate the impact of globalization on regional economies and local communities.
	Course: Core – 11 Course Code: GG701	Students will be able to: <ul style="list-style-type: none"> • Understand the principles of data



	Economic Maps and Diagram	visualization: <ul style="list-style-type: none"> • Understand the principles of data visualization: • Understand the principles of data visualization: • Understand the principles of data visualization: • Understand the principles of data visualization:
Core	Course: Core – 12 Course Code: GG702 Population and Settlement Geography	Students will be able to: <ul style="list-style-type: none"> • Define population geography and its relationship with other social sciences. • Explain the various approaches to studying population geography (e.g., quantitative, qualitative, historical). • Identify the primary sources of population data (e.g., censuses, surveys). • Evaluate the limitations and biases in population data. • Analyse population growth patterns and trends. • Examine factors influencing fertility, mortality, and migration rates. • Understand the concept of population composition and its implications. • Assess the demographic challenges faced by developed and developing countries. • Discuss the relationship between population, environment, and disaster. • Define and differentiate between underpopulation, overpopulation, and optimum population. • Evaluate the major population theories and their relevance to contemporary issues. • Understand the techniques of population projection and their limitations. • Analyse the population problems faced by different countries. • Evaluate the impact of population policies on demographic trends. • Define settlement geography and its



		<p>relationship with other fields.</p> <ul style="list-style-type: none"> • Understand the factors influencing the origin and growth of settlements. • Classify rural settlements based on their pattern, size, and function. • Analyse the problems faced by rural settlements and propose solutions. • Evaluate the role of rural service centers and markets in rural development. • Define urbanization and its causes. • Explain the theories of urban growth and development (e.g., Central Place Theory, Rank-Size Rule). • Analyse the urban hierarchy and its implications for spatial patterns. • Understand the challenges faced by urban areas (e.g., housing shortage, traffic congestion, pollution). • Evaluate the effectiveness of urban planning strategies in addressing urban problems. • Discuss the concept of smart cities and their potential to address urban challenges.
Core	<p>Course: Core – 12 Course Code: GG702 Maps and Diagrams of Population and Settlement Geography</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Calculate population density, growth rate, and population potential. • Measure fertility, mortality, and migration rates using various demographic indicators. • Create and interpret demographic diagrams (e.g., population pyramids, trend graphs). • Map the spatial distribution of population using different techniques (dot maps, choropleth maps). • Analyse the socio-economic implications of population dynamics. • Calculate spatial measures of settlement patterns (e.g., mean center, median center). • Identify service centers and their hierarchical organization. • Measure the size, spacing, and density of rural settlements.



		<ul style="list-style-type: none"> • Create and interpret choropleth maps to visualize settlement patterns. • Apply spatial analysis techniques (e.g., nearest neighbour analysis) to understand settlement patterns. • Analyse settlement patterns on topographic maps and relate them to environmental factors.
DSE	<p>Course: DSE – 1 Course Code: GG711 Agricultural Geography</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Define agricultural geography and understand its scope. • Discuss the contributions of Indian geographers to the field. • Identify the key principles and concepts underlying agricultural geography. • Trace the origin and diffusion of agriculture across the globe. • Analyse the physical factors influencing agricultural practices (e.g., climate, soil, topography). • Evaluate the socio-economic factors shaping agricultural systems (e.g., culture, technology, market). • Identify agricultural regions based on climatic, soil, and socio-economic factors. • Understand the importance of agricultural statistics in planning and policymaking. • Apply sampling techniques to collect agricultural data. • Compare and contrast agricultural systems in different regions of the world. • Evaluate the applicability of agricultural models (e.g., Von Thünen's model) to real-world situations. • Classify agricultural systems based on various criteria (e.g., subsistence, commercial, intensive, extensive). • Analyse the relationship between population growth and food security. • Evaluate the impact of agricultural revolutions on Indian agriculture.



		<ul style="list-style-type: none"> • Identify the major challenges faced by Indian agriculture and propose solutions. • Understand the role of remote sensing in monitoring agricultural land use and crop production.
DSE	Course: DSE – 1 Course Code: GG711 Agricultural Regionalisation and Diagrams and Field Visit	Students will be able to: <ul style="list-style-type: none"> • Understand the concept of agricultural regionalization and its significance. • Analyse the factors influencing crop combination, concentration, and diversification. • Evaluate the impact of crop intensity and agricultural efficiency on agricultural productivity. • Calculate and interpret agricultural indices to assess agricultural performance. • Prepare and analyse agricultural land use maps using GIS and remote sensing techniques. • Understand the importance of agricultural statistics in decision-making and policy formulation.
DSE	Course: DSE – 1 Course Code: GG712 Fluvial Geomorphology	Students will be able to: <ul style="list-style-type: none"> • Define fluvial geomorphology and its significance in understanding landscape evolution. • Explain the hydrological cycle and its components. • Analyse the factors influencing drainage pattern development. • Understand the concept of drainage basin evolution and the factors controlling it. • Describe the characteristics of streamflow and its variation over time. • Explain the mechanics of fluid flow in channels. • Understand the concept of erosion thresholds and their role in shaping landscapes. • Analyse the processes of sediment transport and deposition in river channels.



		<ul style="list-style-type: none"> • Discuss the concept of channel adjustment to changing conditions. • Analyse the factors influencing channel cross-sectional form and bed configuration. • Identify different channel patterns (e.g., meandering, braided) and their characteristics. • Understand the relationship between channel gradient and longitudinal profile. • Define a drainage basin and its components. • Analyse the factors influencing drainage basin form and process. • Calculate morphometric parameters (e.g., basin shape, relief ratio, drainage density). • Understand the relationship between morphometric parameters and hydrological processes. • Apply fluvial geomorphology to practical problems (e.g., flood risk assessment, river restoration). • Analyse human adaptations to flood plains, alluvial fans, and deltaic environments. • Evaluate the impact of reservoirs on river systems. • Utilize remote sensing and GIS techniques to study fluvial processes and landforms.
DSE	Course: DSE – 1 Course Code: GG712 Basin Morphometry and Field Visit	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Understand the concept of a drainage basin and its components. • Analyse a topographic map to identify drainage patterns, channel networks, and divide lines. • Calculate linear attributes such as stream length, stream order, and bifurcation ratio. • Determine areal attributes such as basin area, drainage density, and stream frequency. • Analyse relief attributes such as relief ratio and hypsometric curve.



		<ul style="list-style-type: none"> • Interpret the geomorphic characteristics of a drainage basin based on its morphometric parameters. • Prepare accurate cross-sectional and longitudinal profiles of a stream channel. • Analyse the channel profile to understand the energy gradient and sediment transport processes. • Identify and describe erosional and depositional features in the field. • Collect field data on channel morphology, water discharge, and sediment load. • Prepare a comprehensive field report documenting the findings and analysis. • Apply the principles of fluvial geomorphology to interpret the field observations.
GEC	<p>Course: GEC – 3 Course Code: GG 731 Industrial Development</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Define industrial geography and explain its scope and significance. • Identify the various approaches used in industrial geography (e.g., location theory, spatial analysis). • Understand the methods employed in industrial geography research (e.g., field surveys, remote sensing, GIS). • Classify industries based on various criteria (e.g., size, ownership, nature of activity). • Explain Weber’s Theory of Industrial Location and its limitations. • Analyse the geographical factors influencing the location of industries. • Understand the role of small and medium industries in economic development. • Describe the characteristics and distribution of coal and iron-based industries. • Analyse the factors influencing the location of heavy industries. • Evaluate the impact of heavy



		<p>industries on the environment and society.</p> <ul style="list-style-type: none"> • Understand the role of rural-based industries in rural development. • Identify the major industrial complexes in India. • Analyse the factors contributing to the growth and development of these complexes. • Assess the impact of these complexes on regional and national economies. • Discuss the challenges and opportunities faced by these industrial complexes. • Evaluate the environmental impact of industrialization in India. • Analyse the social implications of industrialization, such as urbanization and migration. • Understand the role of industrial policy in promoting industrial development. • Assess the effectiveness of government policies in addressing industrial challenges.
Core	<p>Course: Core – 13 Course Code: GG 703 Regional Planning and Sustainable Development</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Define region and explain its characteristics. • Understand the scope and objectives of regional planning. • Identify the various approaches and methods used in regional planning. • Analyse the relationship between geography and regional planning. • Identify the criteria for selecting a planning region. • Explain the hierarchical levels of planning regions. • Understand the process of regionalization and its significance. • Discuss the importance of surveys and data collection in regional planning. • Explain the Central Place Theory and its implications for regional planning. • Understand the concepts of growth poles and growth foci.



		<ul style="list-style-type: none"> • Analyse the theories of regional development proposed by various scholars. • Discuss the concept of village clusters and their role in rural development. • Define regional development and identify its key factors. • Analyse the causes and consequences of regional disparities. • Understand the various indicators of development (e.g., GDP, HDI). • Evaluate the effectiveness of regional development policies in India. • Discuss case studies of regional planning initiatives in India. • Define sustainable development and its three pillars (economic, social, environmental). • Identify the challenges and opportunities for sustainable development. • Understand the concept of goal-based development and its implications. • Analyse the role of international cooperation in promoting sustainable development. • Evaluate the principles of good governance and their importance for sustainable development.
Core	Course: Core – 13 Course Code:GG703 Spatial Analysis and Field Visit	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Apply the gravity model to analyse spatial interactions between places. • Calculate measures of centrality (e.g., centrality index, accessibility index) to identify important places. • Use location quotient analysis to identify specialized functions of regions. • Understand the principles of the cell model and its application in urban planning. • Calculate various indices to measure regional disparities (e.g., summit of rank, quartile index). • Analyse the spatial patterns of development at different scales.



		<ul style="list-style-type: none"> • Understand the concept of the human development index and its components. • Conduct field visits to assess the impact of development interventions. • Prepare comprehensive field reports documenting observations and analysis. • Apply geographic information systems (GIS) to map and analyse regional disparities.
Semester VI		
Core	Course: Core – 14 Course Code: GG704 Statistical Methods in Geography	Students will be able to: <ul style="list-style-type: none"> • Understand the role of data in geographic research. • Explain the significance of statistical methods in analysing geographic data. • Identify various sources of geographic data (primary, secondary, and tertiary). • Classify data based on their level of measurement (nominal, ordinal, interval, ratio). • Organize and summarize data using frequency distributions and cross-tabulations. • Calculate measures of central tendency (mean, median, mode) and their geographic representation. • Compute measures of dispersion (standard deviation, variance, coefficient of variation) to assess data variability. • Interpret statistical results to draw meaningful conclusions about geographic patterns. • Understand the concept of sampling and its importance in geographic research. • Identify different sampling techniques (purposive, random, systematic, stratified). • Select appropriate sampling techniques based on research objectives and population characteristics.



		<ul style="list-style-type: none"> • Evaluate the strengths and weaknesses of different sampling methods. • Understand the concept of probability and its applications in geography. • Explain the properties of the normal distribution and its significance in geographic data analysis. • Use probability theory to assess the likelihood of events. • Apply statistical tests to determine the significance of differences between groups. • Calculate measures of association (e.g., Spearman's rank correlation, Pearson's product-moment correlation). • Interpret correlation coefficients to assess the strength and direction of relationships between variables. • Perform regression analysis to model the relationship between variables. • Test the significance of correlation and regression coefficients using statistical tests.
Core	Course: Core – 14 Course Code: GG704 Statistical Exercises in Geography	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Apply statistical techniques to analyse geographic data. • Use appropriate software (e.g., SPSS, R) for statistical analysis. • Interpret statistical results to draw meaningful conclusions about geographic patterns. • Create maps and charts to visualize geographic data. • Apply theoretical concepts to real-world data. • Use GIS software to analyse spatial data. • Interpret the results of spatial analysis. • Develop spatial models to simulate geographic processes.
DSE	Course: DSE – 2 Course Code: GG713 Political Geography	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Define political geography and understand its scope.



		<ul style="list-style-type: none">• Explain the relationship between political geography and other social sciences (e.g., history, sociology, economics).• Trace the development of political geography as a discipline.• Identify the key approaches and methods used in political geography research.• Define nation and state and differentiate between them.• Understand the concept of a nation-state and its characteristics.• Analyse the geopolitical significance of state boundaries, shape, size, and territory.• Evaluate the theories of Heartland and Rimland and their implications for geopolitics.• Explain the concept of electoral geography.• Analyse the factors influencing voting patterns (e.g., demographic, socioeconomic, cultural).• Understand the concept of gerrymandering and its impact on electoral outcomes.• Evaluate the geographic factors influencing electoral representation.• Identify the causes of water-sharing disputes between countries and regions.• Analyse the conflicts arising from forest rights and mineral resources.• Understand the geopolitical implications of resource conflicts.• Evaluate the role of international cooperation in resolving resource conflicts.• Understand the socio-economic impacts of development projects.• Analyse the issues of relief, compensation, and rehabilitation for displaced populations.• Evaluate the role of government policies in addressing development-
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		<p>induced displacement.</p> <ul style="list-style-type: none"> • Discuss the challenges and opportunities associated with Special Economic Zones.
DSE	<p>Course: DSE – 2 Course Code: GG714 Urbanization and Urban System</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Define urban geography and its relationship with other disciplines. • Explain the scope and significance of urban geography. • Identify the various approaches to studying urban geography (e.g., functional, spatial, historical). • Trace the development of urban geography as a field of study. • Analyse the patterns of urbanization in developed and developing countries. • Compare and contrast urban growth in different regions of the world. • Understand the factors influencing urbanization (e.g., economic, social, demographic). • Discuss the challenges and opportunities associated with rapid urbanization. • Classify cities based on their functions (e.g., industrial, commercial, administrative). • Apply quantitative and qualitative methods to analyse urban functions. • Understand the concept of urban hierarchy and its implications for urban systems. • Analyse the morphological characteristics of urban areas (e.g., land use patterns, street networks). • Explain the Central Place Theory and its significance in urban geography. • Analyse the spatial patterns of urban settlements based on central place theory. • Understand the concept of urban hierarchies and their role in regional development. • Evaluate the limitations and applications of central place theory.



		<ul style="list-style-type: none"> • Identify the major urban problems faced by cities (e.g., housing shortage, slum growth, traffic congestion). • Analyse the causes and consequences of urban problems. • Evaluate the effectiveness of urban planning in addressing urban challenges. • Discuss case studies of urban planning in major Indian cities (Delhi, Mumbai, Kolkata, Chennai). • Understand the concept of sustainable urban development.
GEC	<p>Course: GEC – 4 Course Code: GG732</p> <p>Coupled Human and Environment System</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Define the coupled human-environment system and its components. • Explain the interactions between human and natural systems. • Discuss the theories that explain the relationship between humans and the environment (e.g., human ecology, political ecology). • Describe the major biogeochemical cycles (e.g., carbon, nitrogen, phosphorus). • Analyse the impact of human activities on biogeochemical cycles. • Evaluate the consequences of disrupted biogeochemical cycles for ecosystems and human well-being. • Analyse the complex interactions within the Himalaya-Ganga system. • Understand the dynamics of the atmosphere-water system and its impact on climate and weather patterns. • Evaluate the challenges associated with surface and groundwater management. • Discuss the issues related to coastal zone management and marine ecosystems. • Define vulnerability and risk in the context of environmental change. • Assess the vulnerability of different



		<p>regions to climate change and other environmental stressors.</p> <ul style="list-style-type: none"> • Understand the concept of resilience and its importance in adapting to environmental change. • Evaluate the principles of sustainable development and their application to environmental management. • Discuss the role of governance in environmental management. • Analyse the effectiveness of environmental policies and regulations. • Evaluate the role of international cooperation in addressing global environmental challenges. • Understand the concept of ecosystem-based management and its application.
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Semester VII

<p>Core</p>	<p>Core – 15 Course Code: GG801 Evolution of Geographical Thought</p>	<p>Unit I: Pre-Modern Geography</p> <ol style="list-style-type: none"> 1. Historical Perspective: Understand the evolution of geographical knowledge from ancient civilizations to the Dark Ages. 2. Classical Contributions: Analyze the significant contributions of Greek, Roman, and Arab geographers to the field. 3. Geographical Tools and Techniques: Evaluate the development of early geographical tools and techniques. <p>Unit II: Modern Geography</p> <ol style="list-style-type: none"> 1. Renaissance and Classical Period: Explore the resurgence of geographical study during the Renaissance and the emergence of modern geographical thought. 2. National Schools of Thought: Compare and contrast the development of geographical thought in Germany, France, Britain, and the United States. 3. Indian Geography: Understand the evolution of geographical studies in India and its contributions to global geography. <p>Unit III: Geographical Debates</p> <ol style="list-style-type: none"> 1. Determinism vs. Possibilism: Critically analyze the deterministic and possibilistic perspectives
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		<p>and their implications for human-environment interactions.</p> <ol style="list-style-type: none"> 2. Systematic vs. Regional Geography: Evaluate the strengths and weaknesses of systematic and regional approaches to geographical study. 3. Idiographic vs. Nomothetic Approaches: Understand the differences between these two approaches and their applications in geographical research. <p>Unit IV: Paradigms and Models in Geography</p> <ol style="list-style-type: none"> 1. Paradigm Shifts: Analyze the evolution of geographical paradigms and their impact on research. 2. System Analysis: Apply system analysis to understand complex geographical systems and their components. 3. Spatial Concepts: Grasp the fundamental concepts of space, place, and locality and their significance in geographical inquiry. <p>Unit V: Contemporary Trends in Geography</p> <ol style="list-style-type: none"> 1. Quantitative Revolution: Evaluate the impact of quantitative methods on geographical research. 2. Emerging Paradigms: Understand the development of behavioral, radical, feminist, and post-modernist approaches to geography. 3. Future Directions: Explore the future of geography and its potential contributions to addressing global challenges.
<p>Core</p>	<p>Course: Core – 16 Course Code: GG 802 World Regional Geography</p>	<p>Unit I: Asia</p> <ol style="list-style-type: none"> 1. Physical Geography: Understand the diverse physical features of Asia, including its major mountain ranges, river systems, and climatic zones. 2. Human Geography: Analyze the distribution of population, agricultural practices, and industrial activities across Asia. 3. Regional Focus: Southeast Asia: Explore the unique geographical, cultural, and economic characteristics of Southeast Asian countries. <p>Unit II: Europe</p> <ol style="list-style-type: none"> 1. Physical Geography: Understand the diverse physical landscapes of Europe, including its mountain ranges, river systems, and coastal areas.



		<ol style="list-style-type: none"> 2. Economic Geography: Analyze the economic development of European countries, focusing on their industrial and service sectors. 3. Regional Focus: British Isles: Explore the geographical, historical, and cultural significance of the British Isles. <p>Unit III: North and South America</p> <ol style="list-style-type: none"> 1. Physical Geography: Understand the diverse physical landscapes of North and South America, including their mountain ranges, river systems, and climate zones. 2. Economic Geography: Analyze the economic development of North and South America, focusing on their agricultural, industrial, and service sectors. 3. Regional Focus: USA and Brazil: Explore the geographical, economic, and cultural significance of the United States and Brazil. <p>Unit IV: Australia, New Zealand, and Pacific Islands</p> <ol style="list-style-type: none"> 1. Physical Geography: Understand the unique physical features of Australia, New Zealand, and the Pacific Islands, including their diverse landscapes and climate. 2. Economic Geography: Analyze the economic development of these regions, focusing on their primary, secondary, and tertiary sectors. 3. Environmental Issues: Explore the environmental challenges faced by these regions, such as climate change, deforestation, and marine pollution. <p>Unit V: Africa</p> <ol style="list-style-type: none"> 1. Physical Geography: Understand the diverse physical landscapes of Africa, including its deserts, savannas, and rainforests. 2. Economic Geography: Analyze the economic development of African countries, focusing on their primary, secondary, and tertiary sectors. 3. Social and Political Issues: Explore the social and political challenges faced by African countries, such as poverty, inequality, and conflict.
Core	Course Code: GG 802 Section-B: Practical Map Projection	<p>Unit I: Map Projections</p> <ol style="list-style-type: none"> 1. Fundamental Concepts: Understand the basic concepts of map projections, including the Earth's shape, map scales, and the need for



		<p>projection.</p> <ol style="list-style-type: none"> 2. Classification of Map Projections: Classify map projections based on their properties, such as the developable surface used (cylindrical, conical, or planar). 3. Conical and Cylindrical Projections: Construct conical and cylindrical projections using graphical and mathematical methods. 4. Projection Properties and Uses: Analyze the properties and limitations of different projections, and select appropriate projections for specific mapping purposes. <p>Unit II: Zenithal and Conventional Map Projections</p> <ol style="list-style-type: none"> 1. Zenithal Projections: Construct zenithal projections (gnomonic, stereographic, and orthographic) using graphical and mathematical methods. 2. Conventional Map Projections: Construct conventional projections (Mercator, Transverse Mercator, and Polyconic) using graphical and mathematical methods. 3. Projection Analysis: Evaluate the properties and limitations of different projections, including their distortion characteristics. 4. Map Projection Selection: Select appropriate map projections based on specific mapping requirements, such as area, shape, and distance preservation.
DSE	Course: DSE – 3 Course Code: GG811 Geography of Health	<p>Unit I: Foundations of Health Geography</p> <ol style="list-style-type: none"> 1. Core Concepts: Understand the fundamental concepts of health geography, including its scope and significance. 2. Historical Development: Trace the evolution of health geography and its relationship with medical geography. 3. Geographical Factors and Health: Analyze the impact of geographical factors (climate, topography, water resources, etc.) on human health and disease patterns. <p>Unit II: Disease Geography</p> <ol style="list-style-type: none"> 1. Disease Classification: Classify diseases based on various criteria, such as infectious, non-infectious, and chronic diseases. 2. Disease Mapping: Create and interpret disease



		<p>maps to visualize spatial patterns of disease occurrence.</p> <ol style="list-style-type: none">3. Disease Diffusion: Understand the mechanisms of disease diffusion, including contagious, hierarchical, and contagious-hierarchical diffusion. <p>Unit III: Methods and Tools in Health Geography</p> <ol style="list-style-type: none">1. Quantitative Methods: Apply quantitative techniques (statistical analysis, spatial analysis) to analyze health data.2. Qualitative Approaches: Use qualitative methods (interviews, surveys, focus groups) to understand the social and cultural dimensions of health.3. GIS and Health Geography: Utilize Geographic Information Systems (GIS) to visualize, analyze, and map health data.4. Health Care and Management: Explore the organization and delivery of healthcare services in India, including public health programs and policies. <p>Unit IV: Historical and Contemporary Health Issues</p> <ol style="list-style-type: none">1. Historical Diseases: Analyze the impact of historical diseases (e.g., plague, smallpox) on human populations.2. Diseases of Modern Civilization: Understand the emergence and spread of diseases associated with modern lifestyles (e.g., diabetes, heart disease, cancer).3. Environmental Health: Examine the relationship between environmental factors (pollution, climate change) and human health in India. <p>Unit V: Climate Change and Health</p> <ol style="list-style-type: none">1. Climate Change Impacts: Evaluate the direct and indirect impacts of climate change on human health, including heat stress, cold stress, and vector-borne diseases.2. Food Security and Nutrition: Analyze the effects of climate change on food production, food security, and nutritional health.3. Health Policy and Planning: Understand the role of health policy and planning in addressing
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		health challenges, particularly in the context of climate change.
DSE	Course: DSE – 3 Course Code: GG811 Section-B: Practical Maps and Diagrams of Health Data and Field Visit	<p>Unit I: Data Visualization Techniques</p> <ol style="list-style-type: none"> 1. Data Interpretation: Understand the significance of health data and its role in informing public health decisions. 2. Data Visualization: Create clear and effective visualizations of health data using line, bar, pie, and choropleth maps. 3. Data Analysis: Interpret the spatial patterns and trends revealed in health data visualizations. <p>Unit II: Geographic Information Systems (GIS) and Fieldwork</p> <ol style="list-style-type: none"> 1. GIS in Health Geography: Utilize GIS software to create sophisticated maps and analyze spatial patterns of health indicators. 2. Data Visualization with GIS: Produce high-quality maps and visualizations of health data using GIS tools. 3. Fieldwork and Data Collection: Conduct field surveys to gather primary health data, including demographic, socioeconomic, and health status information. 4. Report Writing: Prepare clear and concise reports that document fieldwork findings, data analysis, and conclusions. 5. Critical Thinking and Problem-Solving: Apply critical thinking skills to identify health issues and propose potential solutions based on fieldwork observations and data analysis.
DSE	Course: DSE – 3 Course Code: GG812 Section-A: Theory Geography of Social Wellbeing	<p>Unit I: Geography of Social Wellbeing</p> <ol style="list-style-type: none"> 1. Conceptual Understanding: Define and explain the concept of social wellbeing. 2. Historical Development: Trace the evolution of social geography and its focus on social wellbeing. 3. Nature and Scope: Understand the nature and scope of social geography, including its key themes and research questions. <p>Unit II: Social Diversity and Spatial Patterns</p> <ol style="list-style-type: none"> 1. Social Categories: Analyze the concepts of caste, class, religion, race, and gender as social



		<p>categories.</p> <ol style="list-style-type: none">2. Spatial Distribution: Explore the spatial distribution of these social categories and their implications for social wellbeing.3. Social Inequalities: Examine the social inequalities associated with these categories and their impact on access to resources and opportunities. <p>Unit III: Social Wellbeing and Inclusive Development</p> <ol style="list-style-type: none">1. Components of Social Wellbeing: Identify the key components of social wellbeing, including healthcare, housing, and education.2. Inclusive Development: Understand the concept of inclusive development and its relationship to social wellbeing.3. Policy Analysis: Analyze social welfare policies and programs aimed at promoting inclusive development and social wellbeing. <p>Unit IV: Social Exclusion and Inclusion</p> <ol style="list-style-type: none">1. Spatial Patterns of Exclusion: Explore the spatial patterns of social exclusion, including slums, gated communities, and marginalized neighborhoods.2. Social Conflicts: Analyze the causes and consequences of communal conflicts and crime.3. Social Inclusion: Discuss strategies for promoting social inclusion and reducing social inequalities. <p>Unit V: Social Welfare Programs and Policies</p> <ol style="list-style-type: none">1. Social Welfare Programs: Evaluate the effectiveness of social welfare programs in addressing social issues.2. Policy Analysis: Analyze social welfare policies and their impact on social wellbeing.3. Policy Recommendations: Propose policy recommendations for improving social welfare and reducing social inequalities.
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DSE	Course: GEC – 5 Course Code: GG831 Rural Development	<p>Unit I: Defining Development and Rural Development</p> <ol style="list-style-type: none">1. Understanding Development: Define and explain the concept of development, considering economic, social, and environmental dimensions.2. Interdependence of Urban and Rural Sectors: Analyze the interrelationships between urban and rural sectors and their impact on overall development.3. Need for Rural Development: Identify the challenges faced by rural areas and the importance of rural development for national development.4. Gandhian Approach: Understand the principles and practices of Gandhian approach to rural development, emphasizing self-reliance, sustainability, and community empowerment. <p>Unit II: Rural Economic Base</p> <ol style="list-style-type: none">1. Panchayati Raj System: Analyze the role of Panchayati Raj institutions in rural development.2. Agriculture and Allied Sectors: Assess the importance of agriculture and allied sectors in the rural economy and identify challenges and opportunities.3. Non-Farming Activities: Understand the significance of non-farming activities in diversifying rural livelihoods and reducing dependence on agriculture.4. Cooperatives and PURA: Analyze the role of cooperatives and the PURA (Providing Urban Amenities in Rural Areas) model in rural development. <p>Unit III: Area-Based Approach to Rural Development</p> <ol style="list-style-type: none">1. Drought Prone Area Programs (DPAP): Evaluate the effectiveness of DPAP in mitigating the impact of droughts in rural areas.2. Pradhan Mantri Gram Sadak Yojana (PMGSY): Understand the objectives and impact of PMGSY in improving rural connectivity. <p>Unit IV: Target Group Approach to Rural Development</p> <ol style="list-style-type: none">1. Self-Help Groups (SHGs): Analyze the role of SHGs in empowering rural women and
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		<p>promoting financial inclusion.</p> <ol style="list-style-type: none"> 2. Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA): Evaluate the impact of MGNREGA on rural employment and livelihood security. 3. Pradhan Mantri Jan Dhan Yojana: Understand the objectives and impact of Jan Dhan Yojana in promoting financial inclusion in rural areas. 4. Rural Connectivity: Analyze the importance of rural connectivity (roads, telecommunications) in socio-economic development. <p>Unit V: Provision of Basic Services</p> <ol style="list-style-type: none"> 1. Education and Healthcare: Assess the access to and quality of elementary education and primary healthcare in rural areas. 2. Microcredit: Understand the role of microcredit in empowering rural households and promoting entrepreneurship. 3. Social Inclusion: Analyze the challenges faced by marginalized groups in accessing basic services and propose strategies for inclusive development.
Semester VIII		
Core	Course: Core – 17 Course Code: GG 803 Geography of India, Northeast India and Manipur	<p>Unit I: Physical Geography of India</p> <ol style="list-style-type: none"> 1. Location and Extent: Understand India's geographical location and its geopolitical significance. 2. Physiographic Divisions: Analyze the major physiographic divisions of India, including the Himalayas, the Indo-Gangetic Plain, the Peninsular Plateau, and the Indian Desert. 3. Climate: Understand the climatic conditions of India, including monsoon patterns and their impact on agriculture and economy. 4. Soil and Vegetation: Analyse the different types of soils found in India and their suitability for agriculture. Understand the distribution of natural vegetation in India. <p>Unit II: Population and Social Geography of India</p> <ol style="list-style-type: none"> 1. Population Distribution and Growth: Analyse the spatial patterns of population distribution and understand the factors influencing population growth.



		<p>2. Social Diversity: Explore the diverse social fabric of India, including its racial, caste, religious, linguistic, and tribal diversity.</p> <p>Unit III: Economic Geography of India</p> <ol style="list-style-type: none">1. Agriculture: Analyze the production patterns of major crops like rice, wheat, cotton, and sugarcane. Understand the agricultural regionalization schemes of India.2. Mineral Resources: Evaluate the distribution and production of iron ore, coal, and petroleum in India.3. Industrial Geography: Analyze the spatial patterns of major industries like iron and steel, textiles, automobiles, and information technology.4. Transport System: Understand the role of different modes of transport (rail, road, air, and water) in India's economic development. <p>Unit IV: North East India</p> <ol style="list-style-type: none">1. Physical Geography: Analyze the physical features, climate, drainage, and vegetation of North East India.2. Human Geography: Understand the population distribution, settlement patterns, and socio-cultural diversity of North East India.3. Economic Geography: Evaluate the agricultural, industrial, and tourism potential of North East India.4. Environmental Issues: Analyze the environmental challenges faced by North East India, including deforestation, soil erosion, and landslides.5. Geopolitical Significance: Understand the geopolitical importance of North East India and its strategic location. <p>Unit V: Geography of Manipur</p> <ol style="list-style-type: none">1. Physical Geography: Analyze the physical features, climate, drainage, soil, and vegetation of Manipur.2. Human Geography: Understand the population distribution, settlement patterns, and socio-cultural diversity of Manipur.3. Economic Geography: Evaluate the
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		<p>agricultural, industrial, and tourism potential of Manipur.</p> <ol style="list-style-type: none"> 4. Environmental Issues: Analyze the environmental challenges faced by Manipur, including landslides and soil erosion. 5. Transport System: Understand the role of different modes of transport in Manipur's economic development.
Core	<p>Course: Core – 17 Course Code: GG 803 Section-B: Practical Surveying and Topographical Sheet Interpretation</p>	<p>Unit I: Principles of Surveying</p> <ol style="list-style-type: none"> 1. Fundamentals of Surveying: Understand the basic concepts of surveying, including its objectives and principles. 2. Classification of Surveys: Classify surveys based on their purpose, instruments used, and accuracy required. 3. Chain Surveying: Perform chain surveying to determine horizontal distances and plot simple plans. 4. Compass Surveying: Use a compass to measure bearings and plot simple maps. 5. Plane Table Surveying: Employ plane table surveying techniques to create topographic maps directly in the field. 6. Leveling: Use a dumpy level to determine differences in elevation between points. 7. Theodolite Surveying: Utilize a theodolite to measure horizontal and vertical angles for precise topographic surveys. 8. Total Station Surveying: Employ total stations for efficient and accurate data collection in surveying. <p>Unit II: Topographical Maps and Interpretation</p> <ol style="list-style-type: none"> 1. Topographical Maps: Define topographical maps and understand their purpose and components. 2. Indian Topographical Sheets: Interpret Indian topographical sheets (1:50,000 scale) to extract information about relief, drainage, settlements, and transportation networks. 3. Map Interpretation Techniques: Apply techniques to interpret contour lines, spot heights, and other map symbols to understand the terrain. 4. Analysis of Topographical Features: Analyze the topographical characteristics of hilly,



		<p>plateau, and plain regions, including slope, aspect, and drainage patterns.</p> <p>5. Spatial Analysis: Use topographical maps to identify spatial relationships between different features, such as settlements, transportation networks, and land use patterns.</p>
Core	<p>Course: Core – 18 Course Code: GG 804 Geography of Tourism</p>	<p>Unit I: Foundations of Tourism Geography</p> <ol style="list-style-type: none"> 1. Core Concepts: Define tourism, recreation, and leisure, and understand their interrelationships. 2. Geographical Parameters of Tourism: Analyze the geographical factors influencing tourism development, as outlined by Robinson's framework. 3. Development of Tourism Geography: Trace the evolution of tourism geography as a distinct field of study. <p>Unit II: Types and Patterns of Tourism</p> <ol style="list-style-type: none"> 1. Tourism Classification: Categorize tourism into various types, such as nature, cultural, medical, pilgrimage, and geo-tourism. 2. Tourism Trends and Patterns: Identify emerging trends and patterns in different types of tourism. 3. Geographical Factors: Examine the geographical factors influencing the development of different tourism types. <p>Unit III: Contemporary Tourism Trends</p> <ol style="list-style-type: none"> 1. International Tourism: Analyze global trends in international tourism, including the role of international organizations. 2. Regional Tourism: Evaluate the significance of regional tourism and its impact on local economies. 3. Domestic Tourism: Understand the dynamics of domestic tourism and its role in national economic development. 4. Specialized Tourism: Explore the growth of specialized tourism segments, such as eco-tourism, sustainable tourism, and MICE tourism. <p>Unit IV: Impacts of Tourism</p> <ol style="list-style-type: none"> 1. Economic Impacts: Assess the economic benefits and costs of tourism, including



		<p>employment generation, income distribution, and foreign exchange earnings.</p> <ol style="list-style-type: none"> 2. Environmental Impacts: Analyze the environmental impacts of tourism, such as pollution, resource depletion, and habitat destruction. 3. Social and Cultural Impacts: Evaluate the social and cultural impacts of tourism, including changes in local lifestyles, traditions, and values. 4. Sustainable Tourism Development: Understand the principles of sustainable tourism and explore strategies for minimizing negative impacts and maximizing positive outcomes. <p>Unit V: Tourism in India</p> <ol style="list-style-type: none"> 1. Tourism Infrastructure: Analyze the development of tourism infrastructure in India, including transportation, accommodation, and supporting services. 2. Case Studies: Examine the tourism potential and challenges of Himalayan, desert, and coastal regions in India. 3. World Heritage Sites and Geological Monuments: Understand the significance of India's world heritage sites and national geological monuments for tourism. 4. National Tourism Policy: Evaluate the role of government policies in promoting tourism development in India. 5. Future of Tourism: Discuss future trends and challenges in the Indian tourism industry, including the impact of technology and climate change.
Core	Course: Core –18 Course Code: GG 804 Section-B: Practical Maps and Diagrams of Tourism and Field Visit	<p>Unit I: Information Technology in Tourism</p> <ol style="list-style-type: none"> 1. IT Applications in Tourism: Understand the role of information technology in various aspects of tourism planning and management, including marketing, reservation, and customer relationship management. 2. Data Analysis and Visualization: Utilize data analysis techniques to extract insights from tourism data. 3. Data Visualization: Create effective data visualizations, such as line, bar, and pie charts, to communicate tourism trends and patterns.



		<p>Unit II: Geographic Information Systems (GIS) and Fieldwork</p> <ol style="list-style-type: none"> 1. GIS in Tourism: Apply GIS techniques to analyze spatial patterns of tourism demand, supply, and impacts. 2. Map Creation: Create thematic maps, such as flow maps, proportional circle maps, and choroschematic maps, to visualize tourism data. 3. Map Interpretation: Interpret maps to identify spatial relationships and trends in tourism. 4. Fieldwork and Data Collection: Conduct field surveys to collect primary data on tourist experiences, preferences, and perceptions. 5. Report Writing: Prepare clear and concise reports that document fieldwork findings, data analysis, and conclusions.
DSE	<p>Course: DSE – 4 Course Code: GG 813 Research Methodology in Geography</p>	<p>Unit I: Research Methodology in Geography</p> <ol style="list-style-type: none"> 1. Understanding Research: Define research and its significance in geography. 2. Types of Research: Differentiate between various research types (e.g., exploratory, descriptive, explanatory). 3. Research Design: Develop a clear and concise research design, including problem formulation, hypothesis formulation, and research methodology. 4. Literature Review: Conduct a comprehensive literature review to identify relevant research and theories. 5. Fieldwork: Understand the importance of fieldwork in geographical research and identify suitable case studies. 6. Data Collection Methods: Employ various data collection methods, such as surveys, interviews, observations, and document analysis. 7. Data Analysis and Representation: Analyze collected data using appropriate statistical and qualitative techniques and present findings effectively through maps, charts, and graphs. <p>Unit II: Field Techniques in Geography</p> <ol style="list-style-type: none"> 1. Field Techniques: Select appropriate field techniques based on research objectives and constraints.



		<ol style="list-style-type: none"> 2. Observation Techniques: Utilize participant and non-participant observation methods to gather qualitative data. 3. Questionnaire Design: Develop effective questionnaires, including open-ended and closed-ended questions. 4. Interview Techniques: Conduct structured, semi-structured, and unstructured interviews to collect in-depth information. 5. Focus Group Discussions: Facilitate focus group discussions to gather diverse perspectives on a specific topic. 6. Report Writing: Prepare well-structured research reports, including an introduction, literature review, methodology, results, discussion, and conclusion.
DSE	<p>Course: DSE – 4 Course Code: GG 813 Section-B: Practical Submission of Dissertation</p>	<p>Learning Outcomes for Fieldwork Report By completing a fieldwork report, you will develop the following skills and knowledge:</p> <p>Core Skills:</p> <ul style="list-style-type: none"> • Research Skills: <ul style="list-style-type: none"> ○ Formulating clear research questions ○ Designing effective research methodologies ○ Collecting primary and secondary data ○ Analysing and interpreting data • Critical Thinking: <ul style="list-style-type: none"> ○ Evaluating the reliability and validity of information ○ Identifying patterns and trends in data ○ Drawing informed conclusions • Problem-Solving: <ul style="list-style-type: none"> ○ Identifying and addressing challenges in fieldwork ○ Developing creative solutions to research problems • Communication Skills: <ul style="list-style-type: none"> ○ Writing clear and concise reports ○ Presenting findings effectively, both orally and in writing ○ Engaging in effective communication with diverse stakeholders <p>Geographical Knowledge and Understanding:</p>



		<ul style="list-style-type: none"> • Spatial Analysis: Analyzing the spatial distribution of geographic phenomena • Human-Environment Interactions: Understanding the complex relationships between humans and the environment • Cultural Geography: Exploring the cultural diversity and social dynamics of different places • Economic Geography: Analyzing economic activities and their spatial patterns • Environmental Geography: Assessing environmental issues and their impact on human society
DSE	Course: DSE – 4 Course Code: GG 814 Geography of Energy	<p>Unit I: Introduction to Energy Geography</p> <ul style="list-style-type: none"> • Understand the fundamental concepts of energy and its significance in human society. • Classify different types of energy resources based on their origin and renewability. • Explain the energy system, including energy generation, transmission, and consumption. <p>Unit II: Energy Development and Environment</p> <ul style="list-style-type: none"> • Comprehend the concept of entropy and its implications for energy use. • Trace the historical evolution of energy use and its impact on society and the environment. • Analyse the environmental consequences of energy production and consumption, including climate change, pollution, and resource depletion. • Evaluate the energy-related policies and practices of developed and developing countries. <p>Unit III: Geopolitics of Energy</p> <ul style="list-style-type: none"> • Analyse global trends in energy production and consumption. • Assess the geopolitical significance of energy resources and their impact on international relations. • Examine the role of international energy organizations and agreements in shaping global energy markets. • Evaluate the impact of energy crises and trade disputes on global economies.



		<p>Unit IV: Energy in India</p> <ul style="list-style-type: none">• Analyse India's energy consumption patterns in different sectors and regions.• Assess the spatial distribution of energy resources and their utilization.• Evaluate India's energy policies and planning strategies.• Examine the role of institutions and organizations in India's energy sector.• Understand India's international energy cooperation and agreements. <p>Unit V: Energy Conservation and Sustainable Development</p> <ul style="list-style-type: none">• Analyse the future trends and challenges in global energy supply and demand.• Evaluate the potential of renewable energy sources and energy efficiency technologies.• Understand the concept of sustainable development and its implications for energy use.• Assess the role of traditional and modern energy sources in achieving sustainable development.• Identify potential zones for energy conservation and efficiency improvements.
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**DEPARTMENT OF HISTORY
UNDER GRADUATE**

PROGRAMME OUTCOMES

History is understood as the study of the past in relation to the present and for the benefits of the future. It is the oldest academic disciplines in social sciences and has remained vibrant as a distinct knowledge of education and research for centuries. The programme focuses on coherent understanding of the academic field of history, its different branches and applications and its linkages with related disciplinary subjects. The programme will also demonstrate the use of knowledge of history in formulating and tackling historical related problems and identifying and applying appropriate historical principles and methodologies to solve a wide range of problems associated with history. The programme will also recognise the importance of qualitative as well as quantitative data and approaches for fully comprehending the human history and society. It also aimed to demonstrate professional behaviour such as being objective, unbiased and truthful in all aspects of work and avoiding unethical behaviour such as fabricating, falsifying or misrepresenting date of committing plagiarism.

COURSE OUTCOME

SEMESTER I

CORE COURSE	Core 1 Course Code: BHRC 101A Course Name: Indian Historiography	Course Outcome This course aims at familiarizing students the Indian notion of history and history writing. This curriculum provides an in depth study of the different schools of historiography in India
	Core 2 Course Code: BHRC 102 Paper: History of World Civilization	Course Outcome Students will acquire knowledge about the evolution of human society, and transformation of ancient civilizations like Mesopotamia, Greece, China, Roman and Medieval Europe. They can acquire knowledge about the origin, features, nature and class composition of various societies. They can compare to each and other among the several societies of the world.
Skill Enhancement Course	BHRC 104A Paper: Introduction to Archaeology	Course Outcome The objective of this paper is to give a general view about the principles, methods and theoretical framework of archaeology. Archaeology is the study of human past through their material evidences discovered from the archaeological sites

SEMESTER II



CORE COURSE	Course 1 BHRC 201 Paper: History of India: Earliest time to 550 CE	Course Outcome Students will learn about the historiographical trends, interpretation of historical sources of ancient India as well. They can acquire knowledge about the Vedic period and the rise of Jainism and Buddhism culture in ancient times of India
	Core Course 2 Paper Code: BHRC 202 Paper: History of Europe: 13th Century to 1789	Course Outcome To develop the understanding Europe from a theocratic society to modern Nation state system Renaissance and its after Maths on European society, economy, polity and Culture leading to subsequent development of Nation State and emergence of new ideologies culminating in the form of French Revolution.
Skill Enhancement Course	Paper Code: BHRC 204B Paper: Understanding Popular Culture of India	Course Outcome This paper provides students opportunity to explore various aspects of Indian cultural heritage and cultural diversity in a historical perspective that speak of numerous cultural practices that have evolved over centuries

SEMESTER III

CORE COURSE	Course 1 Paper Code: BHRC 301 Paper: History of India: 550 CE to 1200 CE	Course Outcomes Students will learn and analyse about the transition from historic centuries to the early medieval. They will be able to delineate changes in the realm of polity and culture, puranic religion, the growth of vernacular languages and newer forms of art and architecture
	Course 2 Paper Code: BHRC 302 Paper: History of Europe: 1789-1919	Course Outcomes Students will be able to analyse the historical developments in Europe between 1789-1919 as it focuses on the democratic and socialist foundations of modern Europe. They will be able to situate historical developments of socialist upsurge and the economic forces of the wars, other ideological shifts.
SEMESTER IV		



CORE COURSE	Course 1 Paper Code: BHRC 401 Paper: History of Modern World: 1919-1945	Course Outcome <p>This course aims to provide an understanding of an era of shifting history from Euro centric to world. It discusses the turbulent times when totalitarianism rose as an alternative to democratic and liberal ideal and also the growing desire for peace through formation of organizations such as United Nations.</p>
	Core Course 2 Paper Code: BHRC 402 Paper: History of India: 1707-1857	Course Outcome <p>Students will be able to trace the British colonial expansion in the political contexts of eighteenth century India. They will learn about the changes in society, politics, religion and economy during this period. They will also acquire knowledge about the freedom struggle</p>
	Core Course 3 Paper Code: BHRC 403 Paper: Indian National Movement 1857-1947	Course Outcome <p>The contents of the syllabus are designed to cover core issues pertaining to vast canvass of nationalist history so that the student at the under graduate level is equipped to focus upon the core ideas of national movement in its contextually. India's quest for independence and nation building are interwoven script of history, debated most widely at the global level with various angles. Indeed, India's national movement has vast and divergent ideological base with inner contradictions.</p>

SEMESTER V

CORE COURSE	Course 1 Paper Code: BHRC 501 Paper: History of Modern India: 1947-2000	Course Outcome <p>Students will learn about the post war developments of social, political and economic scenarios of India.</p>
	Course 2 Paper Code: BHRC 502 Paper: Cultural Heritage of India	Course Outcome <p>This course enables students to explore various aspects of cultural heritage and cultural diversity in historical perspective that discusses numerous cultural practices that have evolved over centuries. They will acquire knowledge of changing socio-cultural scenarios of India. As well as they can gather knowledge about the cultural heritage, cultural</p>



		forms and cultural expressions performing arts, fairs and festivals
Discipline Specific Elective	Paper Code: BHRC 503B Paper: History of United States of America -1 (C. 1776-1945)	Course Outcome Students will enhance their knowledge of the history of America. It will help them understand, synthesize and analyze the major themes and debates in the historiography of America
SEMESTER VI		
CORE COURSE	Course 1 Paper Code: BHRC 601 Paper: Asian Resurgence	Course Outcome Students will be able to analyze how global forces of economic, political and cultural change affect contemporary Asian societies. Explains basic historical linkages between Asia and the world, including economic and cultural linkages
	Course 2 Core Course: BHRC 602 Paper: History of Manipur: Early Times to 1891 AD	Course Outcome Students will gather knowledge towards the history, polity and culture of early Manipur. As well as they acquire the knowledge about emergence of Manipur as a nation state. The objective of this paper is to give a general outline of the history of Manipur from the earliest times to the occupation of Manipur by the British in the last quarter of the 19 th century. It aims to acquaint the students with major stages of developments of the kingdom as a nation state and its loss of independence to the British in the eventful Anglo-Manipur war of 1891
Discipline Specific Elective	Paper Code: BHRD 603A Paper: History of Southeast Asia – The 20th Century	Course Outcome This course offers an opportunity to come to grips with the history of region that we now know as Southeast Asia – Indonesia, Malaysia, Thailand, Burma, Vietnam, Cambodia and the Philippines. Chronologically the past covered in the subject is from earliest times to 20 th century
Generic Elective Course	Paper Code: BHRC 604 Paper: History of Modern India	Course Outcome Through this paper attempt will be made to familiarize the students with the main features of History of Modern India. Emphasis will be on the political, economic and social history



SEMESTER VII

CORE COURSE	Course 1 Paper Code: BHRC 701 Paper: History of Modern Manipur (1891-1949)	Course Outcome Students will gather knowledge about the history of colonial Manipur, processes, impact and response of the people towards colonial rule, freedom and integration to India
	Course 2 Paper Code: BHRC 702 Paper: History of Communication in India	Course Outcome This course will aware students of past of communication in India. This curriculum provides in depth study of various dimensions of communication in Indian past
Discipline Specific Elective	Paper Code: BHRD 703C Paper: History of North East India (1826-1947)	Course Outcome To make students aware of the historical development of North East India as a region and its role in the making of India

SEMESTER VIII

CORE COURSE	Course 1 Paper Code: BHRC 801 Paper: Historiography and Historical Method	Course Outcome This course will familiarize students with various schools of historical writings and associated philosophies. This curriculum provides in depth study of historiography as a discipline. Upon successful completion of the course you are expected to develop understanding on various kinds of research, objectives of doing research, research process, research designs and sampling
	Course 2 Paper Code: BHRC 802 Paper: Dissertation/Project Report	Course Outcome The aim of the course is to expose and train students how to conduct research and prepare report on given topic. Upon successful completion of the course you are expected to develop understanding on various kinds of research, objectives of doing research, research process, research designs and sampling.
Discipline Specific Elective	Paper Code: BHRD 803A Paper: History of East Asia (C. 1840-1949)	Course Outcome Students will learn about the nature and structure of the traditional Chinese society and



		how to transform the Chinese society from traditional to modern cultures. They will be aware how the Chinese were united towards the foreign colonial powers and defeated them and ultimately gain to freedom
Generic Elective Course	Paper Code: BHRG 804B Paper: Women in Indian History	Course Outcome The objective of this course is to describe the Feminist Movement, the key concepts in women's students as well as sources for reconstruction of women's history. It will also describe the status of women in Indian society during the Vedic and Medieval period. Further the Reform movement as well as the role of women in India's Freedom struggle will be dealt with



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PROGRAMME OUTCOMES

The 4 year degree course in Political Science intends:

- To develop an understanding of the growing discipline of Political Science and promoting skill based education.
- To facilitate self-discovery in the students and ensure their enthusiastic and effective participation in responding to the needs and challenges of the contemporary world.
- To enable students in developing skills and competencies needed for meeting the challenges and needs of the real world effectively.
- To understand the changing nature of the society, educational institutions and the workplace and inculcate the required skills in the students to understand and respond to the same efficiently and effectively.

SEMESTER I		COURSE OUTCOME
CORE COURSE	PSC 01: Political Theory	1. To initiate and expose learners' fundamental concepts of Political Science, nature of political Theory, the state, its theories and characteristics of sovereignty; theories of Democracies, concept of Liberty, equality, rights and duties; political ideologies and modern approach to political theory.
	PSC 502: Indian Government and Politics.	1. To learn the basic features of Indian Constitution its structures and functions, analyse its strengths and weaknesses. 2. To evaluate the impact of Indian federalism on national integration.
SKILL ENHANCEMENT COURSE (SEC)	PSC SE-1 Public Opinion and Survey Research	1. This course will introduce the students to the debates, principles and Page 61 of 68 practices of public opinion polling in the context of democracies, with special reference to India. It will familiarize the students with



		<p>how to conceptualize and measure public opinion using quantitative methods, with particular attention being paid to developing basic skills pertaining to the collection, analysis and utilization of quantitative data.</p>
SEMESTER II		COURSE OUTCOMES
	PSC 03: Political Theory: Concepts and Debates	<p>1. To expose and familiarize learners' with normative concepts of political theory, inculcate critical, reflective analysis and interpretation of social practices through conceptual toolkit. Such process potentially will empower learners' to contextualize issues and reminds the unending debates on understanding concepts in light of new insights and challenges..</p>
	PSC 04: Political Process in India	<p>1. This course maps the working of _modern_ institutions, premised on the existence of an individuated society, in a context marked by communitarian solidarities, and their mutual transformation thereby. It also familiarizes students with the working of the Indian state, paying attention to the contradictory dynamics of modern state power. Indian political praxis appears to be dis-consonant despite the prevailing legal, constitutional guarantees. Understanding such dichotomy can be possible from a political sociological perspective.</p>
SKILL ENHANCEMENT	PSC SE-II: Peace and Conflict Resolution	<p>1. This unit will study conflict analysis, conflict resolution, conflict prevention, as well as</p>



COURSE (SEC)		<p>the historical and cultural context of organized violence. In addition, addresses the causes of war, social oppression and violence and the challenges of promoting peace and justice internationally and domestically. It also introduces more equitable, cooperative and nonviolent methods that can be used to transform unjust, violent or oppressive world situations. The course is also designed to familiarize students with the historical background of various peace movements, to analyze principles used to resolve conflict, and to provide a view of how peace and conflict resolution are being pursued today. The course will also cover extensive understanding of current research and development within the field of peace and conflict studies and perspective of the environment, gender, migration, and ethnicity.</p>
SEMESTER III		COURSE OUTCOMES
CORE COURSE	PSC 05: Comparative Government and Politics	<ol style="list-style-type: none"> To discuss the political systems of the five countries of United Kingdom, USA, Japan, China and Switzerland including executive, legislature and political parties.
	PSC 06: Perspectives on Public Administration	<ol style="list-style-type: none"> To understand the meaning, nature and scope of public administration, organization, administrative units, personal administration and agencies of financial administration
	PSC 07: International Politics	<ol style="list-style-type: none"> To understand the international politics in various dimensions, international organizations,



		regional groupings and India's relations with major powers
SEMESTER IV		COURSE OUTCOMES
CORE COURSE	PSC 08: Political Process and Institutions in Comparative Perspective.	<ol style="list-style-type: none"> 1. To learn the effectiveness of different political institutions in promoting democracy, stability and economic development. 2. To analyse the impact of political processes on policy outcomes, social justice and human rights.
	PSC 09: Public Policy and Administration in India	<ol style="list-style-type: none"> 1. This unit seeks to provide an introduction to the interface between public policy and administration in India. The essence of public policy lies in its effectiveness in translating the governing philosophy into programs and policies and making it a part of the community living. It deals with issues of decentralization, financial management, citizens and administration and social welfare from a non-western perspective.
	PSC 10: India's Foreign Policy	<ol style="list-style-type: none"> 1. Independent India has evolved and becoming a power to be reckoned with in the global arena, as an 'aspiring power'. Understanding the evolution, practice, domestic and systemic constraints of India's foreign policy is the focus. India's evolving relations with the superpowers during the Cold War and after, bargaining strategy and positioning in international climate change negotiations, international economic governance, international terrorism and the United Nations facilitate an understanding of the changing



		positions and development of India's role as a global player since independence.
SEMESTER V		COURSE OUTCOMES
CORE COURSE	PSC 11: Western Political Thought	1. To understand the political philosophies of Ten Western Political Thinkers of Plato, Aristotle, Machiavelli, Bodin, Hobbes, Locke, Rousseau, Hegel, Karl Marx and Lenin.
	PSC 12: Indian Political Thought –I	1. This unit introduces ideas of ten Indian thinkers who have made abiding influence in society, politics and economy of India. In addition, unique socio-religious reforms associated with each thinkers and contribution to national movements in India form the thrust.
DISCIPLINE SPECIFIC ELECTIVE (DSE) (Choose any one)	DSE-1: Human Rights in Comparative Perspective	1. This course attempts to build an understanding of human rights among students through a study of specific issues in a comparative perspective. It is important for students to see how debates on human rights have taken distinct forms historically and in the contemporary world. The course seeks to anchor all issues in the Indian context, and pulls out another country to form a broader comparative frame. Students will be expected to use a range of resources, including films, biographies, and official documents to study each theme. Thematic discussion of sub-topics in the second and third sections should include state response to issues and structural violence questions.



		1.
SEMESTER VI		COURSE OUTCOMES
CORE COURSE	PSC 13: Modern Western Political Thought	1. Philosophy and politics are closely intertwined. This unit explores the convergence by identifying four main tendencies here. Students will be exposed to the manner in which the questions of politics have been posed in terms that have implications for larger questions of thought and existence.
	PSC 14: Indian Political Thought –II	1. To understand ideas and methods of nationalism, community, secularism, socialism, social justice and total revolution. The main objective of the paper is to introduce ideas of ten thinkers which influence society and politics in India.
DISCIPLINE SPECIFIC ELECTIVE (DSE) (Choose any one)	DSE II: Citizenship in a Globalizing World	1. This course will explore theories of citizenship, the historical development of the concept and its practice of in an increasingly globalizing world.
		1.
SEMESTER VII		COURSE OUTCOMES
CORE COURSE	PSC 15: Government and Politics of North East India	1. To understand the government and politics in North East India starting with the background of British colonial rule. The traditional political institutions and formation of States and local bodies is explored. Political parties and regional political and traditional institutions are examined.
	PSC 16: Socialist Thought	1. To understand the main ideas of socialist thinkers and



		practitioners as well as key ideas of anarchism and fascism
DISCIPLINE SPECIFIC ELECTIVE (DSE) (Choose any one)	DSE III: Development Process and Social Movements in Contemporary India	<p>1. Under the influence of globalization, development processes in India have undergone transformation to produce spaces of advantage and disadvantage and new geographies of power. The high social reproduction costs and dispossession of vulnerable social groups involved in such a development strategy condition new theatres of contestation and struggles. A variety of protest movements emerged to interrogate and challenge this development paradigm that evidently also weakens the democratic space so very vital to the formulation of critical consensus. This course proposes to introduce students to the conditions, contexts and forms of political contestation over development paradigms and their bearing on the retrieval of democratic voice of citizens.</p>
		1.
SEMESTER VIII		COURSE OUTCOMES
CORE COURSE	PSC 17: Gandhian Studies	<p>1. To understand origin of philosophy of Gandhi, spiritualization of politics, key concepts of Gandhi including Satyagraha and non-violence. Gandhian concepts of state, democracy, trusteeship as well as relevance of Gandhi in modern times are discussed.</p>
	PSC 18: State Politics in Manipur	<p>1. To introduce the impact of British colonial rule in the kingdom of Manipur and</p>



		<p>growth of political consciousness and movements during British colonial rule. The evolution of political status of Manipur till statehood in 1972 as well as state executive and legislature are discussed. Political parties, local bodies, various political movements and response of the Indian State, government formations and emerging trends in elections in Manipur are examined.</p>
<p>DISCIPLINE SPECIFIC ELECTIVE (DSE)</p>	<p>DSE IV: Public Policy in India</p>	<p>1. This course provides a theoretical and practical understanding of the concepts and methods that can be employed in the analysis of public policy. It uses the methods of political economy to understand policy as well as understand politics as it is shaped by economic changes. The course will be useful for students who seek an integrative link to their understanding of political science, economic theory and the practical world of development and social change.</p>
<p>GENERIC ELECTIVE COURSES (GEC)</p>	<p>SEMESTER III</p>	
	<p>GE 1: Nationalism in India</p>	<p>1. The purpose of this course is to help students understand the struggle of Indian people against colonialism. It seeks to achieve this understanding by looking at this struggle from different theoretical perspectives that highlight its different dimensions. The course begins with the nineteenth century Indian responses to colonial dominance in the form of</p>



		<p>reformism and its criticism and continues through various phases up to the events leading to the Partition and Independence. In the process, the course tries to highlight its various conflicts and contradictions by focusing on its different dimensions: communalism, class struggle, caste and gender questions.</p>
SEMESTER IV		
	<p>GE II: Gandhi and Contemporary World</p>	<p>1. Locating Gandhi in a global frame, the course seeks to elaborate Gandhian thought and examine its practical implications. It will introduce students to key instances of Gandhi's continuing influence right up to the contemporary period and enable them to critically evaluate his legacy.</p>
SEMESTER V		
	<p>GE III: Feminism: Theory and Practice</p>	<p>1. This unit attempts to introduce history, different strands of feminist thinking as an approach and outlook across the globe, its evolution, debates, dynamics and context so on. It questions the complicity of social structures and relations in gender inequality.</p>
SEMESTER VI		
	<p>GE IV: Politics of Globalization</p>	<p>1. The objective of this generic elective paper is to make students from diverse background understand the process of globalization from a political perspective. This paper will create a broad understanding of the issues and processes globalization based on critical analysis of the various anchors and dimensions</p>



		of globalization.
SEMESTER VII		
	GE V: United Nations and Global Conflicts	1. This course provides a comprehensive introduction to an important multilateral political organization in international relations. It provides a detailed account of the organizational structure and the political processes of the UN, and how it has evolved since 1945, especially in terms of dealing with the major global conflicts. The course imparts a critical understanding of the UN's performance until now and the imperatives as well as processes of reforming the organization in the context of the contemporary global system.
SEMESTER VIII		
	GE 6: Contemporary Political Economy	1. Given the growing recognition worldwide of the importance of the political economy approach to the study of global order, this course has the following objectives: 1. To familiarize the students with the different theoretical approaches; 2. To give a brief overview of the history of the evolution of the modern capitalist world; 3. To highlight the important contemporary problems, issues and debates on how these should be addressed.



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PROGRAMME OUTCOMES

Sociology provides a scientific understanding of society and its various aspects of social life. It helps students understand social processes, the dynamics of social change and the various forms of social interaction. A sociology program generally aims to equip students with a comprehensive understanding of social structures, relationships, and institutions, as well as the skills to critically analyse social phenomena. The program focuses on understanding of Sociological Concepts and Theories where students will gain a strong foundation in key sociological theories, concepts, and perspectives. They will learn how to apply these frameworks to understand various aspects of society, including culture, inequality, and power dynamics. Research skills and methodologies where students will develop the ability to design, conduct, and analyse sociological research using qualitative and quantitative methods. They will learn to collect, interpret, and present data while upholding ethical research standards. It also aim to equipped students on critically analysis of social issues, policies, and practices. They will learn to question assumptions, identify biases, and use sociological theories to understand complex social phenomena. Sociology programs emphasize clear and effective communication, both in writing and orally. Students will learn to present sociological ideas, arguments, and research findings coherently to diverse audiences. Students will also gain an understanding of how global, cultural, and historical contexts influence social issues.

COURSE OUTCOME

SEMESTER I

CORE COURSE	Core 1 Course Code: SOC501C Course Name: Introduction to Sociology	Course Outcome
		<ol style="list-style-type: none"> 1. This paper will introduce students to the basic concepts of sociology which will enhance the conceptual learning and understanding of the basic concepts used in Sociology. 2. The course, supported by an interdisciplinary approach, facilitates learning and reflecting about the multiple – and contextual – socio-cultural registers of Indian society. 3. The students learn to apply the sociological perspective in understanding how society shapes our individual lives. It also provides a foundation for the other more detailed and specialized courses in sociology. 4. The course is designed to incorporate all the key concepts of sociology which would enable the learner to develop keen



		insights to distinguish between the common sense knowledge and Sociological knowledge
	Core 2 Course Code: SOC502C Paper: Sociology of India	Course Outcome <ol style="list-style-type: none"> 1. To introduce students to the vast cultural, linguistic, religious, and ethnic diversity within India, helping them understand how this diversity influences social relationships and identity. 2. To study major social institutions in India, such as family, caste, religion, economy, and politics, examining their historical roots and their contemporary roles in shaping social life. 3. To identify and understand key social problems in India, such as poverty, inequality, caste discrimination, unemployment, illiteracy, etc. To Analyze the root causes, historical backgrounds, and societal impacts.
Ability Enhancement Course – BSOCA-103	AECC1EC Paper: General English	Course Outcome <ol style="list-style-type: none"> 1. To learn varied aspects of grammar which will be useful for the students in writing and speaking. 2. To appreciate the significance of short stories of North Eastern states. 3. To develop critical thinking and a reflective perspective through exposure to literature, help the students to gain better understanding of their own society.
Skill Enhancement Course– BSOCS-104	SOC501S Paper: Techniques of Social Research	Course Learning Outcomes <ol style="list-style-type: none"> 1. Students are introduced to the concept of conducting research, which is inclusive of formulating research designs, methods and analysis of data. Some knowledge of elementary statistics is also provided to the students to acquaint them with quantification of data. 2. The thrust of the course is on empirical reasoning, understanding and analysis of social reality, which is integral to the concepts of quantitative research. Students learn to differentiate between qualitative and quantitative aspects of research in terms of collection and subsequent analysis of data. 3. Through the competing theoretical



		<p>perspectives and methodologies, students are able to understand that social reality is multi-faceted, heterogeneous and dynamic in nature.</p> <p>4. By imparting the knowledge of theory and praxis of research, students are prepared to arrive at a critical understanding of the course. It also equips them with necessary skills for employment in any social research organisation.</p>
SEMESTER II		
CORE PAPER	<p>Core Course 3 – BSOCC-201 Paper Code : SOC503C Paper: Sociological Thinkers-I</p>	<p>Course Learning Outcome</p> <ol style="list-style-type: none"> 1. To familiarize students with the major sociological thinkers, such as Karl Marx, Max Weber, Émile Durkheim, and others, and understand their contributions to sociological theory. 2. To explore foundational theories and concepts introduced by these thinkers, including social structure, capitalism, social action, religion, and functionalism, among others. 3. To examine how the historical, economic, and political contexts in which these thinkers lived influenced their ideas, allowing students to grasp the connection between theory and the social environment. 4. To encourage students to critically assess and compare the strengths and limitations of different sociological theories and perspectives, fostering an analytical approach to social issues. 5. To help students apply classical sociological theories to modern social issues and phenomena, demonstrating the relevance and adaptability of these ideas in understanding current societal trends.
	<p>Core Course 4 - BSOCC-202 Paper Code: SOC504C Paper: Indian Sociological Tradition</p>	<p>Course Learning Outcomes</p> <ol style="list-style-type: none"> 1. Students will understand social thought and the emergence and development of sociology in India. Gain an understanding of foundational concepts within the Indian sociological context, such as caste, tribe, kinship, village community, and religion. 2. Study the works and contributions of



		<p>prominent Indian sociologists, such as G.S. Ghurye, M.N. Srinivas, D.P. Mukerji, A.R. Desai, and others, and understand how their ideas have shaped Indian sociology.</p> <ol style="list-style-type: none"> 3. Examine the complexities of caste as a social institution, its historical context, and its impact on social structure and identity in India. 4. Analyze the processes of social change in India, including modernization, industrialization, urbanization, and the effects of globalization on Indian society.
Skill Enhancement Course- BSOCS-204	Paper Code: SOC502S Paper: Gender Sensitization	Course Outcomes <ol style="list-style-type: none"> 1. Understand the basic concepts related with gender and sex. 2. Acquire the skills to problematize the taken for granted gender bias and prejudices 3. Understand the gender studies and the law to safeguard it. 4. Contemplate gender in Indian Social context and appraise the emerging issues and concerns in gender
Ability Enhancement Course - BSOCA-203	Paper Code: AECC2ES Paper: Environmental Studies	Course Learning Outcomes: <ol style="list-style-type: none"> 1. An understanding of natural resources and associated problems. The dynamic role of individual to conserve the natural resources. 2. A grasp of fundamental principles and core theoretical debates of the discipline and understanding of echo system. 3. An ability to contribute and endeavours for conservation of natural resources, to assess causes, effects and possible solutions of environmental issues and problems. 4. To be alive to the questions of ecology and inequity and sensitive to the questions of environmental justice and ethics.

SEMESTER III

CORE COURSE	Core Course 5 - BSOCC-301 Paper Code: SOC605C Paper: Introduction to Sociological Research	Course Learning Outcomes: <ol style="list-style-type: none"> 1. Students are introduced to the concept of conducting research, which is inclusive of
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		<p>formulating research designs, methods and analysis of data. Some knowledge of elementary statistics is also provided to the students to acquaint them with quantification of data.</p> <ol style="list-style-type: none"> 2. The thrust of the course is on empirical reasoning, understanding and analysis of social reality, which is integral to the concepts of quantitative research. Students learn to differentiate between qualitative and quantitative aspects of research in terms of collection and subsequent analysis of data. 3. Through the competing theoretical perspectives and methodologies, students are able to understand that social reality is multi-faceted, heterogeneous and dynamic in nature. 4. By imparting the knowledge of theory and praxis of research, students are prepared to arrive at a critical understanding of the course. It also equips them with necessary skills for employment in any social research organisation.
	<p>Core Course 6 – BSOC-302 Paper Code: 606C Paper: Political Sociology</p>	<p>Course Objectives: To develop a deep understanding of the complex relationship between society and politics. This course introduces the students to some major theoretical debates and concepts in Political Sociology, while situating these within contemporary political issues. A key thrust of the paper is towards developing a comparative understanding of political relationships through themes such as power, governance and state and society relationships.</p> <ol style="list-style-type: none"> 1. Understanding the foundation of political sociology and a solid understanding of basic concepts in political sociology, including power, authority, the state, democracy, political ideology, and typology of states.
	<p>Core Course 7 – BSOC-303 Paper Code: 607C Paper: Social Demography</p>	<p>Course Learning Outcomes – On successful completion of this course, students will be able to</p> <ol style="list-style-type: none"> 1. Demonstrate a knowledge of key concepts in and different approaches to population studies.



		<ol style="list-style-type: none"> 2. Recognise the relations between population and social groups and processes by linking population size, composition, and growth with fertility, reproduction, and mortality. 3. Explain the dynamics between population, gender, and migration in terms of the role of institutions, policies and programmes, and social relations and groups. 4. Undertake a sociological analysis of international and national population dynamics and population policies.
Generic Elective Course– BSOCC-304	Paper Code: SOC601G Paper: Indian Society: Images and Realities	<ol style="list-style-type: none"> 1. A familiarity with ideas of India in their social and historical context. 2. An acquaintance with key institutions and processes of Indian society. 3. An ability to understand social institutions with sociological imagination with a critical and comparative spirit. 4. A preliminary understanding of sociological discourse on Indian society. 5. A capacity to situate contemporary public issues pertaining to Indian society in the context of these enduring institutions, processes and contentions.
SEMESTER IV		
CORE COURSE	Core 8 – BSOCC-401 Paper Code: SOC608C Paper: Sociological Theory	Course Learning Outcomes: <ol style="list-style-type: none"> 1. The students are introduced to the relationship between theory and perspectives. 2. The students are introduced to sociological theories which they learn in greater detail during the later semesters. 3. This paper also provides a foundation for sociological theories that are a part of papers in the subsequent semesters. 4. The students learn critical thinking skills. They learn how to read, interpret and critique original works of various thinkers.
	Core Course 9 - BSOCC-402 Paper Code: SOC609C Paper: Sociology of Marginal Groups	Course Outcomes: <ol style="list-style-type: none"> 1. Analyse the varied problems of the marginal groups. 2. Evaluate the effectiveness of various programmes/schemes towards the alleviation of the given social problem. 3. Present the role of various agencies in the alleviation of a given social problem.



		<ol style="list-style-type: none"> 4. Design Programme for the welfare of people. 5. Access the issues affecting women's image and quality of life.
	Core Course 10 – BSOCC-403 Paper Code: SOC610C Paper: Social Change and Development	Course Learning Outcomes: <ol style="list-style-type: none"> 1. To learn about the concepts of social change and development. 2. To understand the process of social change which leads to the emergence and development of a society. 3. Learners get familiarised with the theories of social change. 4. To appreciate the need for sustainable and inclusive human development.
Generic Elective Course – BSOCCG-404	Paper Code: SOC602G Paper: ECONOMIC SOCIOLOGY	<ol style="list-style-type: none"> 1. Develops familiarity with different theoretical and conceptual aspects of economic sociology as a specialized branch of knowledge. 2. Develops background knowledge about the diverse ways in which economy is interlinked with other aspects of society and culture. 3. Acquire capacities to understand and analyse the transformations of economy and its key processes in a historical and comparative perspective. 4. Develops abilities to generate research questions and arguments about the intersections of economy and society.

SEMESTER V

CORE COURSE	Core Course 11– BSOCC-501 Paper Code: Paper: Sociology of Gender	Course Learning Outcomes: <ol style="list-style-type: none"> 1. An understanding of concepts such as sex and gender by problematizing common-sensical notions of gender. 2. Raising key issues of power and subordination within the purview of gender and the need for and solutions resorted to as measures to initiate change through gender-based movements. 3. Understanding issues relating to gender both at a national and global level. 4. Places gender in juxtaposition with other forms of stratification and identity such as caste, class, family and work.
	Core Course 12 – BSOCC-502	Course Learning Outcomes:



	<p>Paper: Social Stratification</p>	<ol style="list-style-type: none"> 1. Students will learn about the socio-historical context of stratification theoretical concerns and problems and contemporary issues related to inequalities and its forms. 2. Inculcate in them a truly inter-disciplinary approach in the study of society especially stratification in all its manifestations 3. Understanding of stratification and theories would sensitize students to its various sociological aspects, providing ample scope for applied learning and application. 4. Examining forms of stratification, understanding the relevance of caste, race and ethnic identities in contemporary world.
<p>Discipline Specific Elective- BSOCD-503TT</p>	<p>Paper Code: Paper: Urban Society in India</p>	<p>Course Learning Outcomes:</p> <ol style="list-style-type: none"> 1. The students will build and understanding about urban society and problems associated with repeat urbanisation. 2. Learners become aware of the sociological perspectives on urban social life. 3. Learners develop analytical capacity about urbanisation, urban communities and urban problems. 4. Learners will understand the relevance of urban planning and development.
<p>Generic Elective Course – BSOCG-504</p>	<p>Paper: Rethinking Development</p>	<p>Course Learning Outcomes:</p> <ol style="list-style-type: none"> 1. Understand different ideas of, and approaches to, development. 2. Explain the dynamics between developmental institutions, actors, policies, theories, approaches, and ideas and the implementation, consequences, and experiences of development. 3. Critically analyse the key features of developmental processes in postcolonial India. 4. Undertake a sociological examination of developmental practices in different locations, moments, and fields, and to interpret different outcomes and experiences of development 5. Issues in Developmental Praxis: Development and Displacement, Development and Empowerment.



SEMESTER VI		
CORE COURSE	Core Course 13– BSOCC-601 Paper: Social Problems in India	Course Learning Outcomes: <ol style="list-style-type: none"> 1. Given a social problem in India students will use secondary source research to objectively describe the social problem as it exists in contemporary society and delineate and assess strategies for addressing social problems in an oral or written assignment. 2. Analyze the role of social problem in India from a sociological perspective. 3. Construct the evolution and impact of a given social problem in India. 4. Discuss and ask questions about social problem in India.
	BA 6th Semester Core Course 14 – BSOCC-602 Paper: Family, Marriage and Kinship	Course Learning Outcomes: <ol style="list-style-type: none"> 1. Evaluate the structure and function of the family, marriage and kinship system in India. 2. Present case studies on various types of marriages by analysing them. 3. Analyse issues arising in family, marriages and kinship in contemporary India. 4. Explain the new trends in family, marriages and kinship system in India.
Discipline Specific Elective- BSOCD-603	Paper: Agrarian Sociology	Course Learning Outcomes: <ol style="list-style-type: none"> 1. An empathy for and ability to engage agrarian communities as living societies and understand grasp they condition as human condition. 2. An appreciation of agrarian world and familiarity with the trajectory of theoretical conversation on agrarian issues and their social, political and policy implications. 3. An understanding of emerging as well as enduring issues of concern in Indian agrarian scene. 4. To be ready for a range of academic and professional roles that may require a knowledge of agrarian societies.
Generic Elective Course- BSOCCG-604	Paper: Gender and Violence	Course Learning Outcomes: <ol style="list-style-type: none"> 1. Analyze how the social construction of gender across cultures is fundamental to several experiences of violence. 2. Engage with different theoretical perspectives and their critiques in the



		<p>comprehending- individual, social, culture, political, or economic experiences of violence.</p> <ol style="list-style-type: none"> Critique the dominant western white feminist theories and articulations of liberation, freedom, emancipation and justice through critically informed ideas and responses from non- western contexts. Rethink and re-formulate ideas on various structures of struggle and strategies to counter gendered violence.
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SEMESTER VII

CORE COURSE	Core Course 15 –BSOCC-701 Paper: Contemporary Sociological Theories	<p>Course Learning Outcomes:</p> <ol style="list-style-type: none"> Be able to understand the role and function of theory in the discipline. Know the work and contribution of key thinkers in contemporary Sociology. Describe the classical contribution in sociological theories. Summarize the philosophical roots of sociological theories.
	Core Course 16 –BSOCC-702 Paper: Sociological Research Methods	<p>Course Learning Outcomes:</p> <ol style="list-style-type: none"> Students are introduced to sociological research both from a theoretical and methodological perspective. They understand the importance of research in social science. Students develop the ability to evaluate the methodological validity of the claims made by theory. The course enables students to evaluate a piece of research and move towards designing a simple research project. Students learn that research methods are universal and not bound by cultural location.
Discipline Specific Elective- BSOCD-703	Paper: Environmental Sociology	<p>Course Learning Outcomes:</p> <ol style="list-style-type: none"> An understanding of dynamic between natural and social worlds from a sociological perspective. A grasp of fundamental principles and core theoretical debates of the discipline. An ability to contribute from a sociological stand point to any research endeavours or public policy conversations that asses cause, effects and possible



		<p>solutions of environmental issues and problems.</p> <p>4. To be alive to the questions of ecology and inequity and sensitive to the questions of environmental justice and ethics.</p>
<p>Generic Elective Course – BSOCG-704</p>	<p>Paper: Sociology of Education</p>	<p>Course Learning Outcomes:</p> <ol style="list-style-type: none"> 1. An exposure to the historical transactions of educational practices and cultures at various levels in India. 2. The ability to make connections between the political economy of global educational regimes and the consequent transformation of institutional structures and practices. 3. An appreciation of the importance of cross cultural and historical comparisons as well as micro and macro perspective in apprehending any aspect of education. 4. The course enables students to reflect on their own educational trajectories and analyses its intersections with larger socio-cultural developments.
<p>SEMESTER VIII</p>		
<p>CORE COURSE</p>	<p>Core Course 17 – BSOC-801 Paper: Sociological Thinkers - II</p>	<p>Course Learning Outcomes:</p> <ol style="list-style-type: none"> 1. Understanding the grand foundational themes of sociology. 2. Application of theories and concepts from classical sociological theories to develop intellectual openness and curiosity. 3. Appreciation of the classical concepts and theories to develop awareness of the limits of current knowledge. 4. Understanding the basic methodological approaches of the thinkers, through some original texts and their role in building sociological knowledge.
	<p>Core Course 18– BSOC-802 Paper: Sociology of Religion</p>	<p>Course Learning outcomes:</p> <ol style="list-style-type: none"> 1. Students will be acquainted with representative texts, that symbolize the development of knowledge in the field of Sociology of Religion. They will be able to identify different theories, approaches and concepts that make up the study of religion, distinguish between them and also use term specific to the field in specific context. 2. Students will be able to make a link



		<p>between texts and paraphrase their arguments and use these to communicate their ideas in research papers, projects and presentation.</p> <ol style="list-style-type: none"> 3. By encompassing contemporary developments, the course enables students to think about linkages between religion and society at various levels. 4. Understanding the ideas of religions in India.
Discipline Specific Elective-BSOCD-803	Paper: Sociology of Work	<p>Course Learning Outcomes:</p> <ol style="list-style-type: none"> 1. Understanding work in its social aspects such as gendered work and unpaid work, as different from its better-known economic dimension. 2. Understanding work in its global dimensions, including the mutual relation between work in underdeveloped societies and that in develop ones, thus bringing out the importance of the comparative perspective in the study of work. 3. Learning about the complexities, disparities and inequalities in the area of work.
Generic Elective Course-BSOCCG-804	Paper: Sociology of Social Movements	<p>Course Learning Outcomes:</p> <ol style="list-style-type: none"> 1. At the end of the course, students should be able to distinguish the central principles of different theoretical perspectives in the sociology of social movements and relate them to specific historical and empirical contexts. 2. Learn to use sociological theories on social movements to identify a phenomenon as one. Further, students should be able to distinguish a phenomenon as social movement from another cognate political phenomenon. 3. Understand the dynamics and motivations of individuals and groups participating in social movements and identify reasons for success (or failure) of social movements. 4. Discuss and ask questions about social movement theories and methodologies with insight and precision.



**DEPARTMENT OF COMMERCE
UNDER GRADUATE**

PROGRAMME OUTCOMES

The 4 year degree course in Commerce intends to:

1. Enable learners to get theoretical and practical exposure in the commerce sector which includes Accounts, Marketing, Management, Economics, and Environment etc.
2. Develop student's communication skills and build their confidence to face the challenges of the corporate world.
3. Enhance the capability of decision making at personal and professional levels.
4. Make the students industry-ready and develop various managerial and accounting skills for better professional opportunities.
5. Develop entrepreneurial skills amongst learners.
6. Strengthen the capacities of learners in varied areas of commerce and industry aiming towards holistic development of learners.
7. Thus, after completing their graduation, learners will develop a thorough understanding of the fundamentals in Commerce, Finance, Marketing and Management.

SEMESTER I		COURSE OUTCOME
CORE COURSE	BCH-1.2: FINANCIAL ACCOUNTING	After completion of the course, learners will be able to: <ol style="list-style-type: none"> 1. Apply the generally accepted accounting principles while recording transactions and preparing financial statements; 2. Demonstrate accounting process under computerized accounting system; 3. Measure business income applying relevant accounting standards; 4. Evaluate the importance of depreciation and inventories in financial statements; 5. Prepare cash book and other accounts necessary while running a business; 6. Prepare financial statements of sole proprietors and partnership firms; 7. Prepare accounts for inland branches and not-for-profit organisations.
	BCH – 1.3: BUSINESS ORGANISATION AND MANAGEMENT	After completion of the course, the learners will be able to: <ol style="list-style-type: none"> 1. Distinguish and explain each



		<p>form of business.</p> <ol style="list-style-type: none"> 2. Prepare draft of Article of Association & Memorandum of Association for a business; 3. Explain principles and functions of management implemented in the organisation; 4. Identify and explain the managerial skills used in business; 5. Analyse the concept of Delegation of Authority, coordination, and control.
SKILL ENHANCEMENT COURSE (SEC)	BCH - 1.4: CREATIVITY & INNOVATION	<p>After completion of the course, the learners will be able to:</p> <ol style="list-style-type: none"> 1. Analyze the creative thoughts of renowned personalities in the past and its contribution towards the success and shortcomings of business model; 2. Generate Innovative idea for business and defend/ justify the same; 3. Interpret the Business Competence achieved by various organisations by using the Innovative Business Model; 4. Describe the significance of Innovative Leadership; 5. Analyze patents already granted in their field of interest and make a case with innovative idea for filing a new patent.
SEMESTER II		COURSE OUTCOMES
	BCH-2.2: CORPORATE ACCOUNTING	<p>After completion of the course, learners will be able to:</p> <ol style="list-style-type: none"> 1. Describe the rationale, merits, and demerits of issuing bonus shares for a company; 2. Prepare financial statements (Profit & Loss Account, Balance Sheet, etc.) using online software; 3. Prepare balance sheet after Internal Reconstruction of company; 4. Analyse the case study of major



		<p>amalgamations of companies in India;</p> <p>5. Describe the process of e-filing of annual reports of companies</p>
	BCH-2.3: BUSINESS LAWS	<p>After the completion of the course, the learners will be able to:</p> <ol style="list-style-type: none"> 1. Examine various aspects of entering into a contract and implications of different types of contract; 2. Interpret the regulation governing the Contract of Sale of Goods; 3. Discuss the laws governing partnership and legal consequences of their transactions and other actions in relation with the partnership, and examine contractual obligations and provisions governing limited liability partnership; 4. Describe the significant provisions of the Competition Act to prevent practices having adverse effect on competition and provisions of the Consumer Protection Act to protect the interest of the consumers; 5. Explain the law governing regulation and management of foreign exchange under FEMA.
SKILL ENHANCEMENT COURSE (SEC)	BCH – 2.4: ENTREPRENEURSHIP DEVELOPMENT	<p>After completion of the course, learners will be able to:</p> <ol style="list-style-type: none"> 1. Discern distinct entrepreneurial traits; 2. Identify the parameters to assess opportunities and constraints for new business ideas; 3. Develop a business idea by adopting systematic process; 4. Design strategies for successful implementation of ideas; 5. Create a Business Plan.
SEMESTER III		COURSE OUTCOMES
CORE COURSE	BCH – 3.1: MANAGEMENT ACCOUNTING	<p>After completing the course learners will be able to:</p> <ol style="list-style-type: none"> 1. Describe the concept of



		<p>management accounting;</p> <ol style="list-style-type: none"> 2. Prepare various budgets and to measure the performance of the business firm applying budgetary control measures; 3. Compute standard costs and analyze production cost preparing variance report; 4. Analyze cost, volume and profit and to solve short run decision making problems applying marginal costing and Break-Even technique; 5. Use spreadsheets and Expert System for managerial decision making; 6. Analyse the role of ERP in Business Decision Making.
	<p>BCH-3.2: CORPORATE LAW</p>	<p>After completion of the course, learners will be able to:</p> <ol style="list-style-type: none"> 1. Explain relevant definitions and provisions relating to issue of prospectus and allotment of shares; 2. Synthesize company processes, meetings, and decisions; 3. Describe the framework of dividend distribution, Accounts of the company and Audit and Auditors of company; 4. Determine the role of Board of directors and their legal position; 5. State regulatory aspects involved in Oppression, Mismanagement, corporate restructuring and Winding Up and to study the composition of Adjudicating Authority i.e. NCLT and NCLAT and its powers.
	<p>BCH - 3.3: PRINCIPLES OF MARKETING</p>	<p>After completion of the course, learners will be able to:</p> <ol style="list-style-type: none"> 1. Develop an understanding of basic concepts of marketing, marketing philosophies and environmental conditions affecting marketing decisions of a firm;



		<ol style="list-style-type: none"> 2. Explain the dynamics of consumer behaviour and process of market selection through STP stages; 3. Analyze the process of value creation through marketing decisions involving product development; 4. Analyze the process of value creation through marketing decisions involving product pricing and its distribution; 5. Analyze the process of value creation through marketing decisions involving product promotion and also to equip them with the knowledge of various developments in marketing area that may govern marketing decisions of a firm.
GENERIC ELECTIVE	BCH - 3.4: ACCOUNTING FOR EVERYONE	<p>After the completion of the course, the learners will be able to:</p> <ol style="list-style-type: none"> 1. Analyze various terms used in accounting; 2. Make accounting entries and prepare cash book and other accounts necessary while running a business; 3. Prepare profit and loss account and balance sheet; 4. Prepare accounts based on accounting software; 5. Analyze information from company's annual report.
SEMESTER IV		COURSE OUTCOMES
CORE COURSE	BCH - 4.1: COST ACCOUNTING	<p>After completion of the course, learners will be able to:</p> <ol style="list-style-type: none"> 1. Determine various types of cost of production; 2. Compute unit cost and total cost of production and prepare cost statement; 3. Compute employee cost, employee productivity and employee turnover; 4. Determine cost under job costing, batch costing, process costing,



		<p>contract costing and service costing;</p> <p>5. Apply activity-based costing for cost determination.</p>
	BCH - 4.2: BUSINESS MATHEMATICS	<p>After completion of the course, learners will be able to</p> <ol style="list-style-type: none"> 1. Explain how matrices are used as mathematical tools in representing a system of equations; 2. Apply differential calculus to solve simple business problems; 3. Solve business problems involving complex linear and non-linear relationships between decision variables and their determining factors; 4. Apply mathematical formulation and solution of problems related to finance including different methods of interest calculation, future and present value of money; 5. Do programming for business problems involving constrained optimization.
	BCH - 4.3: HUMAN RESOURCE MANAGEMENT	<p>After the completion of the course, the learners will be able to:</p> <ol style="list-style-type: none"> 1. Develop necessary skills to prepare an HR policy to enable the employees attain work life balance; <ol style="list-style-type: none"> a) Prepare a Human Resource Plan in an organisation; b) Prepare a report on job analysis; c) Organize an induction programme in an organisation; 2. Have an understanding and use of different kinds of training and development strategies in real life scenarios; 3. <ol style="list-style-type: none"> a) Organize counselling sessions for employees in an organisation; b) Design incentive schemes for different job roles in an



		<p>organisation;</p> <p>4. Create HR policies related to grievance redressal, employee health, safety, welfare, and their social security in an organisation.</p>
GENERIC ELECTIVE	BCH-4.4: FINANCIAL LITERACY	<p>After completion of the course, learners will be able to:</p> <ol style="list-style-type: none"> 1. Describe the importance of financial literacy and list out the institutions providing financial services; 2. Prepare financial plan and budget and manage personal finances; 3. Open, avail, and manage/operate services offered by banks; 4. Open, avail, and manage/operate services offered by post offices; 5. Plan for life insurance and property insurance; 6. Select instrument for investment in shares.
SEMESTER V		COURSE OUTCOMES
CORE COURSE	BCH - 5.1: FINANCIAL MANAGEMENT	<p>After completion of the course, learners will be able to:</p> <ol style="list-style-type: none"> 1. A. Explain the nature and scope of financial management; B. Assess the impact of time value of money in different business decisions; 2. Analyze capital budgeting process and apply capital budgeting techniques for business decisions; 3. Discuss the various sources of finance in today's competitive industry; 4. Explain various capital structure theories and analyze factors affecting capital structure decisions; 5. Critically examine various theories of dividend, identify and analyze factors affecting dividend policy; and suggest



		<p>sound dividend policy;</p> <p>6. Design working capital policy based on the assessment of financial requirements.</p>
	BCH - 5.2: BUSINESS STATISTICS	<p>After completion of the course, learners will be able to:</p> <ol style="list-style-type: none"> 1. Apply a basic knowledge of statistics to business disciplines; 2. Develop the ability to analyze and interpret data to provide meaningful information to assist in management decision making activities; 3. Apply appropriate graphical and numerical descriptive statistics for different types of data; 4. Apply probability rules and concepts relating to discrete and continuous random variables to answer questions within a business context; 5. Explain and interpret a variety of hypothesis tests to aid decision making in a business context; 6. Use simple/multiple regression models to analyze the underlying relationships between the variables
GENERIC ELECTIVE	BCH-5.4: INVESTING IN STOCK MARKETS	<p>After completion of this course, learners will be able to:</p> <ol style="list-style-type: none"> 1. Explain the basics of investing in the stock market, the investment environment as well as risk & return; 2. Analyze Indian securities market including the derivatives market; 3. Examine EIC framework and conduct fundamental analysis; 4. Perform technical analysis; 5. Invest in mutual funds market.
DISCIPLINE SPECIFIC ELECTIVE (DSE) (Choose any one)	BCH – 5.3a: FINANCIAL REPORTING AND CORPORATE DISCLOSURE	<p>After completion of this course, learners will be able to:</p> <ol style="list-style-type: none"> 1. The students will be able to understand the concepts and treatment for special transactions such as Related Party Disclosures, employee benefits,



		leases, financial instruments, and Consolidated Financial Statements in the context of financial reporting as per Ind AS.
	BCH - 5.3b: FINANCIAL MARKETS AND INSTITUTIONS	The course aims to provide learners an overview of financial markets & institutions in India.
	BCH - 5.3d: CONSUMER BEHAVIOUR AND MARKETING RESEARCH	To enable the students to acquire the knowledge on consumer behaviour and its application in marketing field.
	BCH - 5.3e: PERFORMANCE MANAGEMENT	To familiarize the students with the concepts, process, methods and techniques used for performance appraisal in an organization
SEMESTER VI		COURSE OUTCOMES
CORE COURSE	BCH-6.1: BUSINESS ECONOMICS	After the completion of the course, the learners will be able to: <ol style="list-style-type: none"> 1. Examine how different economic systems function and evaluate implications of various economic decisions; 2. Examine how consumers try to maximize their satisfaction by spending on different goods; 3. Analyze the relationship between inputs used in production and the resulting outputs and costs; 4. Analyze and interpret market mechanism and behaviour of firms and response of firms to different market situations; 5. Examine various facets of pricing under different market situations.
	BCH-6.2: INCOME TAX LAW AND PRACTICE	After the completion of the course, the learners will be able to: <ol style="list-style-type: none"> 1. Comprehend the concepts of taxation, including assessment year, previous year, assesses, person, income, total income, agricultural income and determine the residential status of persons; 2. Compute income under different heads, applying the charging



		<p>provisions, deeming provisions, exemptions and deductions;</p> <ol style="list-style-type: none"> 3. Apply the clubbing provisions and provisions relating to set-off and carry forward of losses to determine the gross total income; 4. Calculate the tax liability of an individual and HUF as well as deductions from gross total income and determine the total income of an individual and HUF; 5. Comprehend the provisions relating to filing of return of income.
GENERIC ELECTIVE	BCH-6.4: BASICS OF MANAGEMENT	<p>After completion of the course, learners will be able to:</p> <ol style="list-style-type: none"> 1. Explain competitive landscape of a company using Porter's five force model; 2. Appreciate the applicability of SWOT analysis of a company; 3. Interpret the relevance of delegation and decentralization of authority in an organisation; 4. Analyse the various needs of an individual using Maslow's Need-Hierarchy Theory; 5. Examine various management techniques in successfully running a business organisation.
DISCIPLINE SPECIFIC ELECTIVE (DSE) (Choose any one)	BCH – 6.3a: ACCOUNTING FOR GOVERNMENT AND LOCAL BODIES	After completion of the course, students will understand local government accounting systems
	BCH 6.3b: INVESTMENT MANAGEMENT	After completion of the course, the students will be familiarized with different aspects of investment management and risks, introduced to the framework of their analysis and valuation and highlight the process of portfolio management.
	BCH – 6.3d: RETAIL MANAGEMENT	After completion of the course, learners will be exposed to acquire skills in Retail Management
	BCH – 6.3e: LABOUR WELFARE & SOCIAL SECURITY	After completion of the course, students will acquire skills in Labour Welfare & Social Security



SEMESTER VII		COURSE OUTCOMES
CORE COURSE	BCH – 7.1: INTERNATIONAL BUSINESS	<p>After completing the course, the learners will be able to:</p> <ol style="list-style-type: none"> 1. Explain the process of globalization, its impact on the evolution and growth of international business and to appreciate the changing dynamics of the diverse international business environment (including various modes of entry); 2. Evaluate the theoretical dimensions of international trade and intervention measures adopted, appreciate the significance of different forms of regional economic integration and explain the concept of Balance of payment account and its components; 3. Explain the significance of different forms of regional economic integration and to appreciate the role played by various international economic organisations such as the WTO, UNCTAD, IMF, and World Bank; 4. Assess international financial environment, and basic features of the foreign exchange market – its characteristics and determinants; 5. Examine the concept and form of foreign direct investment, and to create awareness about emerging issues in international business such as outsourcing and ecological issues.
	BCH - 7.2: GOODS & SERVICES TAX (GST) AND CUSTOMS LAW	<p>After the completion of the course, the learners will be able to:</p> <ol style="list-style-type: none"> 1. Explain concept, need, and utility of indirect taxes and understand and analyse the taxable event, i.e., supply under GST;



		<ol style="list-style-type: none"> 2. Describe the provisions relating to levy of GST; 3. Identify exemptions for different types of goods and services and examine the various provisions of input tax credit; 4. Analyze provisions regarding penalties and interest and to prepare and file GST return on-line; 5. Understand the significant provisions of the customs law.
GENERIC ELECTIVE	BCH-7.4: PERSONAL FINANCE AND PLANNING	<p>After completion of this course, learners will be able to:</p> <ol style="list-style-type: none"> 1. Explain the meaning and appreciate the relevance of Financial Planning; 2. Familiarize with regard to the concept of Investment Planning and its methods; 3. Examine the scope and ways of Personal Tax Planning; 4. Analyze Insurance Planning and its relevance; 5. Develop an insight in to retirement planning and its relevance.
DISCIPLINE SPECIFIC ELECTIVE (DSE) (Choose any one)	BCH – 7.3a: ADVANCED ACCOUNTING	After completion of the course, the students will be acquainted with and familiar with the process and preparation of accounts of different types of organizations.
	BCH - 7.3b: RISK MANAGEMENT	After completion of the course, the students will have the knowledge and an insight into the spectrum of risks faced by businesses and to learn the techniques of managing risks.
	BCH – 7.3d: ADVERTISING & MEDIA MANAGEMENT	After completion of the course, student will be familiarized with the concepts of Advertisement and Media Management, Campaign Planning and Organizing Functions
	BCH – 7.3e: STRATEGIC HUMAN RESOURCE MANAGEMENT	After completion of the course, students will acquire skills in Strategic Human Resource Management



SEMESTER VIII		COURSE OUTCOMES
CORE COURSE	BCH – 8.1: RESEARCH METHODOLOGY	<p>After completion of the course the learners will be able to:</p> <ol style="list-style-type: none"> 1. Outline the significance of Research and Research Methodology and to analyze the problems in conducting social science research in India; 2. Formulate Research Problem and Research Design; 3. Determine the sample size in consonance with the research problem and research design; 4. Collect and tabulate required primary and secondary data for analysis; 5. Prepare a report on the basis of collected data.
	BCH – 8.2: AUDITING	<p>After completion of the course, learners will be able to:</p> <ol style="list-style-type: none"> 1. Analyse and interpret the qualitative features of information provided in the Financial Statements of a company; 2. Analyse and interpret the contents of corporate annual report and auditor's report to understand the true and fair financial position of a company; 3. Compute and analyse accounting ratios of a company; 4. Conduct fund flow and working capital analysis; 5. Conduct cash flow analysis using cash flow reporting software.
	BCH-8.3: RESEARCH PROJECTS WITH VIVA - VOCE	Dissertation
GENERIC ELECTIVE	BCH-8.4: TRAINING AND DEVELOPMENT	<p>After completion of the course, learners will be able to:</p> <ol style="list-style-type: none"> 1. Analyze the training strategies adopted by companies in real situations; 2. Identify training needs of an individual by conducting Training Need Analysis;



		<ol style="list-style-type: none">3. Differentiate between the applicability of various training strategies and select a strategy based upon the result of TNA;4. Develop a training and development module;5. Evaluate and assess the cost and benefits of a training and development programme.
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**DEPARTMENT OF PSYCHOLOGY
UNDER GRADUATE**

PROGRAMME OUTCOMES

The 4 year degree course in Psychology intends:

- To develop an understanding of the growing discipline of psychology and promoting skill based education.
- To facilitate self-discovery in the students and ensure their enthusiastic and effective participation in responding to the needs and challenges of the contemporary world.
- To enable students in developing skills and competencies needed for meeting the challenges and needs of the real world effectively.
- To understand the changing nature of the society, educational institutions and the workplace and inculcate the required skills in the students to understand and respond to the same efficiently and effectively.

SEMESTER I		COURSE OUTCOME
CORE COURSE	PY 501: Foundations of Psychology	1. To introduce the basic concepts of psychology in order to prepare the foundation for advance learning among students 2. To expose various fields of psychology to expand the horizons of students
	PY 502: Learning	1. To enable students to understand the basic theories of learning 2. To systematically prune students for usage of those theories to the practical solutions of problems and research
SKILL ENHANCEMENT COURSE (SEC)	PY 521: Stress Management	1. To aware students about the stressors of everyday life that we experiences and the stress related to various situations. 2. To enrich students so that they can make adjustments and manage to cope with stress more effectively
SEMESTER II		COURSE OUTCOMES
	PY 503: Social Psychology	1. To aware the students about the social phenomena which are shaping our mind and behavior 2. To deeply understand the dynamics of social issues



		responsible for determining human cognitions and human behavior
	PY 504: Cognitive Psychology	<ol style="list-style-type: none"> 1. To learn about the patterns of information processing and human cognition 2. To learn the associated theories of cognition
SKILL ENHANCEMENT COURSE (SEC)	PY 522: Emotional Intelligence	<ol style="list-style-type: none"> 1. To understand the concept of emotional intelligence and learn ways of developing it 2. To contextualize the role of emotional intelligence in management of individual emotions
SEMESTER III		COURSE OUTCOMES
CORE COURSE	PY 601: Biopsychology	<ol style="list-style-type: none"> 1. To understand the relationship between brain and behavior 2. To explore the process through which biological processes influence thoughts emotions and behaviours
	PY 602: Basic Statistics in Psychology	<ol style="list-style-type: none"> 1. To familiarize students with the psychological research and importance of statistics 2. To introduce basics of statistical methods and tools used in descriptive statistics of quantitative research
	PY 603: Theories of Personality	<ol style="list-style-type: none"> 1. To understand why are there differences among individuals 2. To have conceptual clarity on the theories and concept of personality
SEMESTER IV		COURSE OUTCOMES
CORE COURSE	PY 604: Theories of Intelligence	<ol style="list-style-type: none"> 1. To help students to conceptualize the intelligence and associated human abilities 2. To aware students about the different models of intelligence, theories of intelligence and application to artificial intelligence
	PY 605: Systems and Theories of Psychology	<ol style="list-style-type: none"> 1. To be aware of historical development of psychology and theories of psychology 2. To know in detail about the



		various schools of thoughts on psychology and philosophical roots of psychology
	PY 606: Psychological Testing	<ol style="list-style-type: none"> 1. To expose students to know the steps of psychological test preparation and standardization 2. Also to know the conduction of physiological tests, and know about a person's skills, intellect level, expressiveness, interests and attitude on particular areas
SEMESTER V		COURSE OUTCOMES
CORE COURSE	PY 701: Inferential Statistics	<ol style="list-style-type: none"> 1. To educate students with the techniques of inferential statistics and hypothesis testing 2. To provide training to the students for hypothesis formulation and its testing by using quantitative data
	PY 702: Development over the Life Span	<ol style="list-style-type: none"> 1. To assist students to know the basic concepts of human development 2. To understand the development processes in the domains like physical, cognitive, social, emotional and psychological in life-span
DISCIPLINE SPECIFIC ELECTIVE (DSE) (Choose any one)	PY 711: Positive Psychology	<ol style="list-style-type: none"> 1. To familiarize students towards positive aspects of life which infuse positivity of mind 2. The holistic understanding on mind, body, soul and their synchronization which will results into 'realized being'
	PY 712: Media and Psychology	<ol style="list-style-type: none"> 2. To elaborate the importance of media in civil society and its role on human psyche and behaviour 3. To contextualize the influence of media on concept formation, attitude building, social influence, prejudice and discrimination
SEMESTER VI		COURSE OUTCOMES
CORE COURSE	PY 703: Psychopathology	<ol style="list-style-type: none"> 1. To make students aware about the mental disorders 2. To train students for making



		accurate and psychologically relevant explanation of mental disorders
	PY 704: Organizational Behavior	<ol style="list-style-type: none"> 2. To develop an awareness of the concepts related to organizational behavior 1. To help the students to develop connectivity between concepts and practices of organizations
DISCIPLINE SPECIFIC ELECTIVE (DSE) (Choose any one)	PY 713: Health Psychology	<ol style="list-style-type: none"> 1. To enable the students to understand about health and associated determinants of well-being 2. To help students to understand the spectrum of health and illness for better health management
	PY 714: Community Psychology	<ol style="list-style-type: none"> 2. To assist students to learn about the concepts of community psychology inevitably shaping human behaviour and psyche 1. To familiarize students with the techniques and interventions strategies to serve at community level
SEMESTER VII		COURSE OUTCOMES
CORE COURSE	PY 801: Psychotherapy and Counseling	<ul style="list-style-type: none"> • To prepare students for imparting counseling • To make students resourceful for handling mental health issues by using psychotherapies and counseling
	PY 802: Psycho-diagnostics	<ol style="list-style-type: none"> 1. To expose students to administer different psychological assessment tools for diagnostic purpose 2. To understand the rationale and purpose of those diagnosis theoretically and practically along with appropriate tools for diagnosis.
DISCIPLINE SPECIFIC ELECTIVE (DSE) (Choose any one)	PY 811: Career Guidance and Counseling	<ol style="list-style-type: none"> 1. To prepare students to gain expertise on guidance and counseling to different areas like education, career and vocational counseling 2. To gain the theoretical



		knowledge about career guidance and counseling
	PY 812: Culture and Indigenous Psychology	<ol style="list-style-type: none"> To enable an in-depth engagement of students with the core psychological concepts imbed in a culture To creatively evolve the applications of culture and indigenous psychology to understand the well-being of a person
SEMESTER VIII		COURSE OUTCOMES
CORE COURSE	PY 803: Applied Social Psychology	<ol style="list-style-type: none"> To help student understand social problems and gain knowledge about intervention strategies To expose students to the social issues those have impact on human psyche and behavior
	PY 804: Research Methodology	<ol style="list-style-type: none"> To educate students with the processes and the methods of quantitative and qualitative psychological researches To train students and prepare them for research traditions with sensitivities towards ethical issues of psychological research
DISCIPLINE SPECIFIC ELECTIVE (DSE)	PY 813: DISSERTATION	
GENERIC ELECTIVE COURSES (GEC)	SEMESTER III	
	PY 631: General Psychology	<ol style="list-style-type: none"> To have understanding about the psychology as a course To orient students to have theoretical knowledge of psychology
	SEMESTER IV	
	PY 632: Psychology of Human Relations	<ol style="list-style-type: none"> To expose the students about the dynamics of human relationships To equip them for healthy relationship and make them resourceful to resolve issues in relationship
SEMESTER V		
	PY 731: Youth Psychology	<ol style="list-style-type: none"> To make student to understand



		<p>the state of youth and contextualize it to the society, culture and identity</p> <ol style="list-style-type: none"> To make students aware about the major issues concerning youth and the strategies to resolve them
SEMESTER VI		
	PY 732: Psychology of Personal Growth And Development	<ol style="list-style-type: none"> To help students to know about their psychology and to themselves To equip students with the interpersonal skills for the personal growth and development
SEMESTER VII		
	PY 831: Psychology in Everyday Life	<ol style="list-style-type: none"> To gain knowledge about psychological processes happens in human being everyday To learn why and how person's behave in a specific way in everyday life
SEMESTER VIII		
	PY 832: Psychology for Health and Well-Being	<ol style="list-style-type: none"> To learn the basic concepts of health and role of psychology in determining overall well-being To help students to understand the spectrum of health and illness for better health management



DEPARTMENT OF BOTANY UNDER GRADUATE

PROGRAMME OUTCOMES

The student graduating with the Degree B. Sc. (Honours) Botany should be able to acquire:

- **Core competency:** Students will acquire core competency in the subject Botany, and in allied subject areas.
 - The student will be able to identify major groups of plants and compare the characteristics of lower (e.g. algae and fungi) and higher (angiosperms and gymnosperms) plants.
 - Students will be able to use the evidence based comparative botany approach to explain the evolution of organism and understand the genetic diversity on the earth.
 - The students will be able to explain various plant processes and functions, metabolism, concepts of gene, genome and how organism's function is influenced at the cell, tissue and organ level.
 - Students will be able to understand adaptation, development and behaviour of different forms of life.
 - The understanding of networked life on earth and tracing the energy pyramids through nutrient flow is expected from the students.
 - Students will be able to demonstrate the experimental techniques and methods of their area of specialization in Botany.

- **Analytical ability:** The students will be able to demonstrate the knowledge in understanding research and addressing practical problems.
 - Application of various scientific methods to address different questions by formulating the hypothesis, data collection and critically analyze the data to decipher the degree to which their scientific work supports their hypothesis.

- **Critical Thinking and problem solving ability:** An increased understanding of fundamental concepts and their applications of scientific principles is expected at the end of this course. Students will become critical thinker and acquire problem solving capabilities.

- **Digitally equipped:** Students will acquire digital skills and integrate the fundamental concepts with modern tools.

- **Ethical and Psychological strengthening:** Students will also strengthen their ethical and moral values and shall be able to deal with psychological weaknesses.

- **Team Player:** Students will learn team workmanship in order to serve efficiently institutions, industry and society.

- **Independent Learner:** Apart from the subject specific skills, generic skills, especially in botany, the program outcome would lead to gain knowledge and skills for further higher



studies, competitive examinations and employment. Learning outcomes based curriculum would ensure equal academic standards across the country and broader picture of their competencies. The Bachelor program in Botany and Botany honours may be mono-disciplinary or multidisciplinary.

SEMESTER I		COURSE OUTCOME
CORE COURSE	Paper Code: BOTC- 101: Paper Title: Viruses, Bacteria, Fungi and Plant Pathology (Theory) Paper Code: BOTC-102(P) Paper Title: Viruses, Bacteria, Fungi and Plant Pathology (Practical)	On completion of this course, the students will gain knowledge on and will be able to: <ol style="list-style-type: none"> 1. Characteristics, diversity, nutrition and importance of microbes 2. Classify viruses, bacteria, fungi and lichens based on their characteristics and structures 3. Replication of viruses 4. Bacterial reproduction and genetic recombination 5. Reproduction and life cycle of representative species of different groups of fungi 6. Develop critical understanding of plant diseases and their remediation.
	Paper Code BOTC-103 . Paper Title: Algae, Bryophytes, Pteridophytes and Gymnosperms (Theory) Paper Code: BOTC-104(P) Paper Title: Algae, Bryophytes, Pteridophytes and Gymnosperm (Practical)	On completion of this course, the students will gain knowledge and will be able to: <ol style="list-style-type: none"> 1. Understand the classification, characteristic features, reproduction, life cycle patterns, biodiversity and economic importance of various groups of marine and fresh water algae. 2. Demonstrate an understanding of Bryophytes, Pteridophytes and Gymnosperms 3. Develop critical understanding on morphology, anatomy and reproduction of Bryophytes, Pteridophytes and Gymnosperms 4. Understanding of plant evolution and their transition to land habitat. 5. Demonstrate proficiency in the experimental techniques and



		methods of appropriate analysis of Algae, Bryophytes, Pteridophytes, Gymnosperms.
SKILL ENHANCEMENT COURSE (SEC)	<p>Paper code: BOTS-107 Paper Title: Mushroom Cultivation (Theory)</p> <p>Paper Code: BOTS-108(P) Paper Title: Mushroom Cultivation (Practical)</p>	<p>On completion of this course, the students will gain knowledge of or be able to:</p> <ol style="list-style-type: none"> 1. Identify various types and categories of mushrooms. 2. Demonstrate various types of mushroom cultivating technologies. 3. Value the economic factors associated with mushroom cultivation 4. Device new methods and strategies to contribute to mushroom production.
SEMESTER II		COURSE OUTCOMES
	<p>Paper code: BOTC-201 Paper Title: Plant Systematics (Theory)</p> <p>Paper code: BOTC-202(P) Paper Title: Plant Systematics (Practical)</p>	<p>Students understand plant classifications, phylogeny and identification with nomenclatural rules</p> <ol style="list-style-type: none"> 1. Classify Plant systematics and recognize the importance of herbarium and Virtual herbarium 2. Evaluate the Important herbaria and botanical gardens 3. Interpret the rules of ICN in botanical nomenclature 4. Assess terms and concepts related to Phylogenetic Systematics 5. Generalize the characters of the families according to Bentham & Hooker's system of classification
	<p>Paper Code: BOTC – 203 Paper Title: Biomolecules and Cell Biology (Theory)</p> <p>Paper Code: BOTC – 204(P) Paper Title: Biomolecules and Cell Biology (Practical)</p>	<p>On completion of this course, the students will be able to:</p> <ol style="list-style-type: none"> 1. Develop understanding on chemical bonding among molecules 2. Identify the concept that explains chemical composition and structure of cell wall and membrane



		<ol style="list-style-type: none"> 3. Classify the enzymes and explain mechanism of action and structure 4. Compare the structure and function of cells & explain the development of cells 5. Describe the relationship between the structure and function of biomolecules <p>Key Words: Nucleic Acids, Amino Acids, Proteins, Lipids, Fatty Acids, Signal Transduction.</p>
SKILL ENHANCEMENT COURSE (SEC)	<p>Paper code: BOTS-207 Paper Title: Nursery and Gardening (Theory).</p> <p>Paper code: BOTS-208(P) Paper Title: Nursery and Gardening (Practical).</p>	<p>On completion of this course the students will be able to;</p> <ol style="list-style-type: none"> 1. Understand the process of sowing seeds in nursery 2. List the various resources required for the development of nursery 3. Distinguish among the different forms of sowing and growing plants 4. Analyse the process of Vegetative propagation 5. Appreciate the diversity of plants and selection of gardening 6. Examine the cultivation of different vegetables and growth of plants in nursery and Gardening.
SEMESTER III		COURSE OUTCOMES
CORE COURSE	<p>Paper Code: BOTC - 301 Paper Title: Plant Metabolism (Theory).</p> <p>Paper Code: BOTC-302 (P) Paper Title: Plant Metabolism (Practical)</p>	<p>On completion of this course, the students will gain knowledge and will be able to:</p> <ol style="list-style-type: none"> 1. Differentiate anabolic and catabolic pathways of metabolism 2. Learn the similarity and differences in metabolic pathways in animals and plants. 3. Recognize the importance of Carbon fixation and assimilation in plants. 4. Explain the ATP-Synthesis



		<p>5. Interpret the Biological nitrogen fixation in metabolism</p> <p>6. Grasp the concept of signal reception and transduction in a cell</p> <p>Keywords: Anabolism, catabolism, Pentose phosphate pathway, ATP synthesis, Electron Transport Chain, MAP kinase cascade.</p>
	<p>Paper Code: BOTC-303 Paper Title: Ecology and Phytogeography (Theory).</p> <p>Paper Code: BOTC-304(P) Paper Title: Ecology and Phytogeography (Practical).</p>	<p>On completion of this course, students will gain knowledge and will be able to:</p> <ol style="list-style-type: none"> 1. Understand the complex interrelationship between organisms and environment 2. Acquire knowledge on different methods for vegetation analysis 3. Evaluate community patterns and processes including ecosystem functions 4. Understand evolving strategies for sustainable natural resource management and biodiversity conservation. 5. Attain knowledge on principles of phytogeography and plant endemism 6. Gain practical knowledge on different instruments used for analyzing soil & climate variables. 7. Conduct qualitative and quantitative analysis for different parameters of both soil and water.
	<p>Paper Code: BOTC-305 Paper Title: Genetics and Cytogenetics (Theory).</p> <p>Paper Code: BOTC-306(P) Paper Title: Genetics and Cytogenetics (Practical).</p>	<p>On completion of this course, the students will gain knowledge and will be able to:</p> <ol style="list-style-type: none"> 1. Have conceptual understanding of laws of inheritance, genetic basis of loci and alleles and their linkage. 2. Comprehend the effect of chromosomal abnormalities in numerical as well as structural



		<p>changes leading to genetic disorders.</p> <ol style="list-style-type: none"> 3. Develop critical understanding of chemical basis of genes and their interactions at population and evolutionary levels. 4. Analyze the effect of mutations on gene functions and dosage. 5. Examine the structure, function and replication of DNA.
SEMESTER IV		COURSE OUTCOMES
CORE COURSE	<p>Paper Code: BOTC-401 Paper Title: Economic Botany and Plant Resource Utilization (Theory).</p> <p>Paper Code: BOTC 402(P) Paper Title: Economic Botany and Plant Resource Utilization (Practical)</p>	<p>On completion of this course, the students will gain knowledge and will be able to:</p> <ol style="list-style-type: none"> 1. Understand the core concept of Economic Botany and its relationship with environment and society 2. Develop first-hand information of plants used as food, the various kinds of nutrients available in the plants 3. Understand the dietary requirements of proteins, fats, amino-acids, vitamins etc that can be met by plants 4. Learn to perform the micro-chemical tests to demonstrate various components. 5. Learn about the use of fiber plants, beverages, fruits and vegetables that are integral to day to day life of plants 6. Learn to explore the regional diversity in food crops and other plants and their ethnobotanical importance as well
	<p>Paper Code: BOTC-403 Paper Title: Molecular Biology (Theory)</p> <p>Paper Code: BOTC-404(P) Paper Title: Molecular Biology (Practical).</p>	<p>On completion of this course, the students will gain knowledge and able to:</p> <ol style="list-style-type: none"> 1. Develop an understanding of nucleic acid, organization of DNA in prokaryotes and eukaryotes, DNA replication mechanism, genetic code and



		<p>transcription process.</p> <ol style="list-style-type: none"> Understand the mechanisms involved in processing and modification of RNA and translation process, function and regulation of expression. Gain insights into the application in biotechnology in plant, animal and microbial sciences.
	<p>Paper Code: BOTC – 405 Paper Title: Plant Morphology and Anatomy (Theory)</p> <p>Paper Code: BOTC – 406(P) Paper Title: Plant Morphology and Anatomy (Practical).</p>	<p>On completion of this course, the students will be able to:</p> <ol style="list-style-type: none"> Develop an understanding of concepts and fundamentals of plant morphology and anatomy Use various morphological terminologies while describing a plant Understand the Knowledge of various cells and tissues, meristem, epidermal and vascular tissue system in plants. Develop critical understanding on the evolution of concept of organization of shoot and root apex. Correlate the anatomical structure with morphology and functions. Analyze the composition of different parts of plants and their relationships Evaluate the adaptive and protective systems of plants.
SEMESTER V		COURSE OUTCOMES
CORE COURSE	<p>Paper Code: BOTC - 501 Paper Title: Reproductive Biology of Angiosperms (Theory)</p> <p>Paper Code: BOTC – 502(P) Paper Title: Reproductive Biology of Angiosperms (Practical).</p>	<p>On completion of this course, the students will be able to:</p> <ol style="list-style-type: none"> Recall the history of reproductive biology of angiosperms and recognize the importance of genetic and molecular aspects of flower development. Understand structure and functions of anther wall and



		<p>pollen wall</p> <ol style="list-style-type: none"> Evaluate the special structures of ovule Solve self-incompatibility in pollination and fertilization and relate between embryos, endosperm and seed Comprehend the causes of polyembryony and apomixes with its classification.
	<p>Paper Code: BOTC – 503 Core Course: Plant Physiology (Theory).</p> <p>Paper Code: BOTC – 504(P) Core Course: Plant Physiology (Practical).</p>	<p>On completion of this course, the students will be able to;</p> <ol style="list-style-type: none"> Understand water relation of plants with respect to various physiological processes. Explain chemical properties and deficiency symptoms of mineral elements in plants Realize the roles of hormones in plant growth and development and their applications in agriculture and horticulture Understand the role of light in various developmental processes such as flowering, germination and dormancy. Understand transport mechanisms and translocation in the phloem, Appreciate the commercial applications of plant physiology.
<p>DISCIPLINE SPECIFIC ELECTIVE (DSE) (Choose any one)</p>	<p>Paper Code: BOTD - 509 Paper Title: Plant Pathology (Theory)</p> <p>Paper Code: BOTD – 510(P) Paper Title: Plant Pathology (Practical)</p>	<p>On completion of this course, students will be able to:</p> <ol style="list-style-type: none"> Understand the concept of plant pathology and its related terminologies and disease causing organisms. Identification of important crop diseases, crop disease management using chemical pesticides and other practices.



SEMESTER VI		COURSE OUTCOMES
<p>CORE COURSE</p>	<p>Paper Code: BOTC-601 Paper Title: Biostatistics and Bioinformatics (Theory).</p> <p>Paper Code: BOTC-602(P) Paper Title: Biostatistics and Bioinformatics (Practical).</p>	<p>On completion of this course, the students will gain knowledge and able to:</p> <ol style="list-style-type: none"> 1. Understand subject matter and relevance of statistics and bioinformatics to biological sciences. 2. Understand the classification and structuring of biological data. 3. Understand the construction of histogram and frequency distribution table. 4. Understand the numerical calculation, procedure of location and variability of data. 5. Understand the logic behind probability and probability distribution models in biology. 6. Understand the importance of hardware and software tools in accessing and retrieving biological data through internet. 7. Understand the relevance and development of bioinformatics in biology. 8. Know the use of basic tools involve in understanding bioinformatics. 9. Know the importance of biological databases in sequencing nucleic acid and proteins.
	<p>Paper Code: BOTC-603 Paper Title: Plant Biotechnology (Theory).</p> <p>Paper Code: BOTC-604(P) Paper Title: Plant Biotechnology (Practical).</p>	<p>On completion of this course, the students will gain knowledge and able to:</p> <ol style="list-style-type: none"> 1. Learn the basic concepts, principles and processes in plant biotechnology. 2. Explain the concepts, principles and usage of the acquired knowledge in biotechnological, pharmaceutical, medical, ecological and agricultural applications.



		<ol style="list-style-type: none"> 3. Use basic biotechnological techniques to explore molecular biology of plants 4. Explain how biotechnology is used to for plant improvement and discuss the biosafety concern and ethical issue of that use.
DISCIPLINE SPECIFIC ELECTIVE (DSE) (Choose any one)	Paper code: BOTD-607 Paper Title: Biodiversity Conservation (Theory).	On completion of this course, the students will gain knowledge and able to: <ol style="list-style-type: none"> 1. Judge the value of biodiversity 2. Understand the role of biodiversity in stabilizing the climate and economy 3. Know the causes and consequences of loss of biodiversity and planning of conservation strategies.
	Paper Code: BOTD-608(P) Paper Title: Biodiversity Conservation (Practical)	
SEMESTER VII		COURSE OUTCOMES
CORE COURSE		
DISCIPLINE SPECIFIC ELECTIVE (DSE) (Choose any one)		
SEMESTER VIII		COURSE OUTCOMES
CORE COURSE		
DISCIPLINE SPECIFIC ELECTIVE (DSE)		
GENERIC ELECTIVE COURSES (GEC)	SEMESTER III	
	Paper Code: BOTG-305 Paper Title: Medicinal and Aromatic Plants (Theory). Paper Code: BOTG-306(P) Paper Title: Medicinal and Aromatic Plants (Practical).	LEARNING OUTCOMES On completion of this course, the students will gain knowledge and will be able to: <ol style="list-style-type: none"> 1. Identify important medicinal and aromatic plants 2. Apply techniques of conservation and propagation of medicinal and aromatic plants 3. Setup process of harvesting, drying and storage of medicinal herbs 4. Comprehend the extraction



		<p>methods of essential oils from aromatic plants</p> <p>5. Propose new strategies to enhance growth of medicinal herbs considering the practical issues pertinent to India.</p>
SEMESTER IV		
<p>Paper Code: BOTG-401 Paper Title: Seed Technology (Theory)</p> <p>Paper Code: BOTG-402(P) Paper Title: Seed Technology (Practical).</p>	<p>Learning outcomes: After completion of the course, the students will be able to;</p> <ol style="list-style-type: none"> 1. Understand the theoretical orientation of seed development 2. Analyse the different ways of seed processing in different plants 3. Examine the various methods of seed testing 4. Understand the method of seed production in different plants 5. Explain the concept of hybrid seed production 	
SEMESTER V		
<p>Paper Code: BOTG-503 Paper Title: Global Climate Change (Theory)</p> <p>Paper Code: BOTG-504(P) Paper Title: Global Climate Change (Practical)</p>	<p>Learning Outcome After completing this course the learner will be able to;</p> <ol style="list-style-type: none"> 1. Develop understanding on the concept and issues of global environmental change 2. Analyze the causes and effects of depletion of stratospheric ozone layer 3. Examine the climate change and its effect on living beings 4. Understand the physical basis of natural green gashouse effect on man and materials 5. Evaluate human influenced driver of our climate system and its applications. 	
SEMESTER VI		
<p>Paper Code: BOTG-601 Paper Title: Biodiversity (Theory).</p> <p>Paper code: BOTG-602(P) Paper Title: Biodiversity</p>	<p>Learning outcomes: On completion of this course, the students will gain knowledge and able to:</p> <ol style="list-style-type: none"> 1. Understand the fundamental concepts related to biodiversity 	



	(Practical)	and its conservation 2. Understand the general characteristics and diversity of microbial forms 3. Understand the general characteristics and diversity of algae, bryophytes and pteridophytes 4. Understand the general characteristics and diversity of gymnosperms and Angiosperms.
	SEMESTER VII	
	SEMESTER VIII	



**DEPARTMENT OF CHEMISTRY
UNDER GRADUATE**

PROGRAMME OUTCOMES

The 4 year degree course in Chemistry intends:

- Science knowledge: Apply the knowledge of Physics, Chemistry, and Mathematics in solving/analyzing problems in industries, research and development institutions, public sector units, higher education and in academia.
- Problem Analysis: Analyze and interpret theoretical and practical data at various work places.
- Design/ Development of solutions: Design a system, component, or process to meet the desired needs within realistic constraints such as economic, environmental, health and safety, manufacturability, and sustainability.
- Investigations of complex problem: Develop the ability to apply the knowledge of applied research to investigate complex problems and provide viable solutions.
- Modern tool usage: Identify, formulate, and solve scientific problems using modern tools and techniques.
- Science and Society: Acquire the broad education necessary to understand the impact of scientific solutions in a local, global, economic, environmental, and societal context.
- Life-long Learning: Demonstrate effective usage of existing resources at workplaces and raise awareness of the importance of life-long learning.

COURSE OUTCOMES:

SEMESTER I		COURSE OUTCOME
CORE COURSE	CH-111:Inorganic Chemistry-I	1. Atomic theory and its evolution. 2. Learning scientific theory of atoms, concept of wavefunction. 3. To understand atomic theory of matter, composition of atom. 4. Importance of hydrogen bonding, metallic bonding.
	CH-112: Organic Chemistry-I	1. Basic of organic molecules, structure, bonding, reactivity and reaction mechanisms. 2. Stereochemistry of organic molecules–conformation and configuration, asymmetric molecules and nomenclature. 3. Electrophile, nucleophiles, free radicals, electronegativity, resonance, and intermediates along the reaction pathways.
SKILL	CH-SEC-113:Water remediation	1. Learn about the sources of



ENHANCEMENT COURSE (SEC)	& conservation studies	<p>water pollutants and the mechanisms of detoxification, bio-remediation and need of green chemistry.</p> <p>2. Understand the importance of water conservation and erosion of soil and how to control the erosion.</p>
SEMESTER II		COURSE OUTCOMES
	Core Course-3: CH-120: Analytical Chemistry	<p>1. Familiarization with fundamentals of analytical chemistry.</p> <p>2. Understanding analytical tools, statistical methods applied to analytical chemistry.</p>
	Core Course 4: CH-123: Physical Chemistry – I	<p>1. Familiarization with various states of matter.</p> <p>2. Behavior of real gases, its deviation from ideal behavior, equation of state, isotherm, and law of corresponding states</p>
SKILL ENHANCEMENT COURSE (SEC)	CH-SEC-123: Chemistry in everyday life	<p>1. Develop their understanding on the energy production in human body</p> <p>2. Develop the idea of materials chemistry in everyday life</p>
SEMESTER III		COURSE OUTCOMES
CORE COURSE	Core Course-5:CH-230: Green Chemistry	<p>1. Green chemistry and its principles.</p> <p>2. Understanding the use of green chemistry principle and processes in laboratory reactions.</p> <p>3. Understanding design of chemical reactions/chemical synthesis using green chemistry principles.</p>
	Core Course-6:CH-231: Inorganic Chemistry-II	<p>1. Oxidation-Reductions and their use in metallurgy. Chemistry of sand p-block elements.</p> <p>2. Chemistry of noble gases and their compounds; application of VSEPR theory in explaining structure and bonding.</p>
	Core Course 7: CH-233: Physical Chemistry – II	<p>1. Laws of thermodynamics and concepts. Partial molar quantities and its attributes.</p>



		2. Understanding the application of thermodynamics: Joule Thompson effects, partial molar quantities.
SEMESTER IV		COURSE OUTCOMES
CORE COURSE	Core Course-8: CH-240: Molecular Spectroscopy and Photochemistry	<ol style="list-style-type: none"> 1. To understand the interaction of electromagnetic radiation with molecules. 2. Franck-Condon principles and electronic transitions. 3. Photochemical reactions.
	CH-241: Inorganic Chemistry-III	<ol style="list-style-type: none"> 1. Coordination compounds– its nomenclature, theories, d-orbital splitting in complexes, chelate. 2. Molecular orbital theory, d-orbital splitting in tetrahedral, octahedral, square planar complexes, chelate effects. 3. Hemoglobin and its importance in biological systems.
	CH-242: Organic Chemistry-II	<ol style="list-style-type: none"> 1. Familiarization about classes of organic compounds and their methods of preparation. 2. Use of reagents in various organic transformation reactions. 3. Preparation and uses of various classes of organic compounds.
SEMESTER V		COURSE OUTCOMES
CORE COURSE	CH-350: Introduction to Quantum Chemistry	<ol style="list-style-type: none"> 1. To provide the concept of important physical and experimental facts which dismiss Newton's classical mechanics that fail to explain a number of microphysical phenomena, consequently lead to the birth of quantum mechanics. 2. To help the student solve the eigen-value equation, particle in a one-dimensional box, Schrodinger equation.
	CH-352: Organic Chemistry-III	<ol style="list-style-type: none"> 1. Nitrogen containing functional groups and their reactions. 2. Understanding reactions and reaction mechanism of nitrogen



		<p>containing functional groups.</p> <p>3. Classification, structure, mechanism of reactions of few selected alkaloids and terpenes.</p>
DISCIPLINE SPECIFIC ELECTIVE (DSE) (Choose any one)	CH-DSE-351: Medicinal Chemistry	<p>1. The basics of medicinal chemistry, biophysical properties</p> <p>2. Biophysical and chemical properties of enzymes, hormones, vitamins</p> <p>3. Concept of rational drug design</p>
	CH-DSE-352: Electrochemistry.	<p>1. Basic principle of laws of electrochemistry</p> <p>2. About chemical cells and their functions</p> <p>3. About potentiometric titrations and their applications.</p>
SEMESTER VI		COURSE OUTCOMES
CORE COURSE	CH-360: Materials Chemistry	<p>1. Crystalline solids–parameters, symmetry. Silica based materials in applications.</p> <p>2. Mesoporous/microporous silica based materials, functionalized hybrid materials and its applications.</p> <p>3. Understanding basic parameters of crystalline solids, symmetry and crystal structures.</p>
	CH-363: Physical Chemistry – III	<p>1. Phases, components, Gibbs phase rule, Phase diagrams and applications.</p> <p>2. Understanding phases, components, Gibb’s phase rule and its applications, construction of phase diagram of different systems, the application of phase diagram.</p> <p>3. Catalyst – mechanism of catalytic action, enzyme catalysis.</p>
DISCIPLINE SPECIFIC ELECTIVE (DSE) (Choose any one)	CH-DSE 361: Heterocyclic Chemistry	<p>1. To study various heteroatomic systems</p> <p>2. To study their synthetic approaches and reactivities.</p>
	CH-DSE 364: Biochemistry	<p>1. Biological importance of</p>



		carbohydrates . 2. Classifications and structures of proteins. as catalysts. 3. Lipids and nucleic acids
SEMESTER VII		COURSE OUTCOMES
CORE COURSE	CH-471: Advanced Chemistry-I	1. Develop their understanding on the application of computer in chemistry 2. Quantum chemistry and intrinsic chemical reactions.
	CH-472: Advanced Chemistry-II	1. understand that changes in matters upon interaction with electromagnetic radiation. 2. learn about photochemistry and pericyclic reactions of important organic compounds.
DISCIPLINE SPECIFIC ELECTIVE (DSE) (Choose any one)	CH-DSE-471: Advanced Analytical Chemistry	1. Statistical methods in chemical analysis 2. Theory and applications of polarography, atomic absorption spectroscopy and chromatography. 3. Theory and applications of thermogravimetric analysis.
	CH-DSE-472: Polymer Chemistry- I	1. The mechanism of polymer material formation. 2. Molecular weight and structure property relationship. 3. Characterization of polymers.
SEMESTER VIII		COURSE OUTCOMES
CORE COURSE	CH-481: Research Methodology	1. Understand the concept of research and different types of research in the context of biology. 2. Develop competence on data collection and process of scientific documentation. 3. Analyze the ethical aspects of research.
	CH-482: Project/Dissertation	1. Synthesis of Aspirin. 2. Finding EMF of electrochemical cells. 3. Forensic analysis of given species 4. Water analysis of nearby areas; finding out the toxic/heavy



		metals, anions and purification of water using simple available lab technology.
DISCIPLINE SPECIFIC ELECTIVE (DSE)	CH-DSE-481: Advanced Material Chemistry	<ol style="list-style-type: none"> To make the student learn about the crystal structures, the different techniques employed for the synthesis of compounds and methods for growing single crystals and how to characterize them. To learn about the properties and applications of nanomaterials.
GENERIC ELECTIVE COURSES (GEC)	SEMESTER III	
	CH-GEC-230: Atomic structure, bonding, general organic chemistry and stereochemistry	<ol style="list-style-type: none"> To provide basic knowledge about ionic, covalent and metallic bonding and the Periodicity in properties with reference to the s- and p- block To introduce a new concept of visualizing the organic molecules in a three dimensional space with the recapitulation of fundamentals of organic chemistry and to establish the applications of these concepts.
	SEMESTER IV	
	CH-GEC-240: Chemical Energetics, Equilibria, Solutions and Hydrocarbons	<ol style="list-style-type: none"> To develop basic understanding of the chemical energetics, laws of thermodynamics, chemical and ionic equilibrium. To acquaint the students with the functional group approach to study organic chemistry.
	SEMESTER V	
CH-GEC-350: Ionic Equilibria, Electrochemistry and Functional Group Organic Chemistry	<ol style="list-style-type: none"> To learn about ideal and non-ideal solutions, Raoult's law, partially miscible and immiscible solutions and their applications. To learn about electrolytic and galvanic cells, measurement of conductance and its applications, measurement of emf and its applications. 	
SEMESTER VI		



	<p>CH-GEC-360: Chemistry of s-, p-, d- and f- Block Elements, liquids, solids, Kinetic Theory and Chemical kinetics</p>	<ol style="list-style-type: none"> 1. To illustrates the diversity and fascination of inorganic chemistry through the study of properties and utilities of s- and p-block elements and their compounds. 2. To introduce the students to d and f block elements and highlights the concept of horizontal similarity in a period and stresses on their unique properties.
SEMESTER VII		
	<p>CH-GEC-470: Coordination Chemistry and Spectroscopy</p>	<ol style="list-style-type: none"> 1. To familiarize the students with coordination compounds which find manifold applications in diverse fields. . 2. To learn the theories governing the formation of coordination compounds. 3. To disseminate the concepts and methodology of spectroscopy and its applications.
SEMESTER VIII		
	<p>CH-GEC-480: Chemistry of Food, Nutrition and Preservation</p>	<ol style="list-style-type: none"> 5. To know about the basic of human physiological system and food science. 6. To learn about the nutrition and its importance. 7. To learn about the food preservation and its utility



**DEPARTMENT OF MATHEMATICS
UNDER GRADUATE**

PROGRAMME OUTCOMES

PO1	Disciplinary knowledge: Bachelor degree in Mathematics is the culmination of in-depth knowledge of Algebra, Calculus, geometry, Real analysis, Differential equations and several other branches of pure and applied mathematics, this also leads to relevant areas such as computer science and other disciplines.
PO2	Communication Skills: Ability to communicate the various mathematical concepts effectively using variety of examples mostly having real life applications and their geometric visualization. The skills and knowledge gained in this programme will lead to the proficiency in analytical reasoning which can be used to express thoughts and views in mathematically or Logically correct statements.
PO3	Critical thinking and analytical reasoning: The students undergoing this programme acquire the ability of critical thinking and logical reasoning and will apply in formulating or generalizing specific hypothesis, conclusion. The learner will be able to recognize and distinguish the various aspects of real life problems.
PO4	Problem solving: The Mathematical knowledge gained by the student through this programme develops an ability to solve the problems, identify and define appropriate computing requirements for its solutions. This programme will enhance the overall development.
PO5	Research related skills: After the completion of this programme, the student will develop the capability of inquiring about appropriate questions relating to the Mathematical concepts, arguments. He/shewillbeabletodefineproblems,formulatehypothesis,proofs,writethe Results obtained clearly.
PO6	Information/digital literacy: The completion of this programme will enable the learner to use appropriate softwares to solve the system of algebraic and differential equations.
PO7	Self-directed learning: The student after the completion of the programme will be able to work independently, make an in-depth search of various areas of Mathematics and resources for self learning in order to enhance knowledge in mathematics.
PO8	Moral and ethical awareness / reasoning: The student after the completion of the course will develop an ability to identify unethical behaviour such as fabrication, falsification or misinterpretation of data and adopting objectives, unbiased and truthful actions in all aspects of life in general and Mathematical studies in particular.
PO9	Lifelong learning: This programme provides self directed learning and life long learning skills. With these skills, the learner will be able to think independently, improve personal development.

COURSE OUTCOMES:

SEMESTER I		COURSE OUTCOME
CORE COURSE	MMC 101 Calculus	After completion of the course, a student



		<p>will be able to:</p> <ul style="list-style-type: none"> i) Sketch curves in a plane in the different coordinate systems of reference. ii) Understand the Calculus of vector-valued functions. iii) Apply calculus to develop basic principles of planetary motions.
	MMC 102 Algebra	<p>After completion of the course, a student will be able to:</p> <ul style="list-style-type: none"> 1. Employ De Moivre,s theorem in a number of application to solve numerical problem 2. Apply Euclid,s algorithm and backwards substitution to find greatest common divisor. 3. Recognize consistent and inconsistent system of linear equation by using rank.
SKILL ENHANCEMENT COURSE (SEC)	MMSE-101B: Computational Mathematics Laboratory	<p>After completion of the course, a student will be able to</p> <ul style="list-style-type: none"> 1. Develop, manage power point presentations while preparing for presentations in seminars with additional skills such as inserting pictures, objects, multimedia etc. 2. Work out with excel files with skill of preparing charts to represent the information found in daily life situations. 3. Use mathematica software to plot the graph of various functions.
SEMESTER II		COURSE OUTCOMES
	MMC 203 Real Analysis	<p>After completion of the course, a student will be able to</p> <ul style="list-style-type: none"> 1. Understanding many properties of the real line \mathbb{R} and learn to define sequence in terms of functions from to a subset of \mathbb{R} 2. Recognize bounded, convergent,



		<p>divergent, Cauchy and monotonic sequence and to calculate limit superior limit inferior and the limit of a bounded sequence</p> <p>3. Apply the ratio, root, alternating series and limit comparison test for convergence and absolute convergence of an infinite series of real numbers.</p>
	MMC 204 Differential Equations	<p>After completion of the course, a student will be able to</p> <ol style="list-style-type: none"> 1. Formulate Differential Equations for various Mathematical models. 2. Solve first order non-linear differential equation and linear differential equations of higher order using various techniques to solve and analyze various mathematical models.
SKILL ENHANCEMENT COURSE (SEC)	MMSE-202A: Python Programming	<p>After completion of the course, a student will be able to</p> <ol style="list-style-type: none"> 1. Develop, document, and debug modular python programs to solve computational problems. 2. Select a suitable programming construct and data structure for a situation. 3. Use built-in strings, lists, sets, tuples and dictionary in applications 4. Define classes and use them in applications.
SEMESTER III		COURSE OUTCOMES
CORE COURSE	MMC 305 Theory of Real Functions	<p>After completion of the course, a student will be able to</p> <ol style="list-style-type: none"> i) A rigorous approach of the concept of limit of a function. ii) About continuity and uniform continuity of functions defined on intervals. iii) The geometrical properties of continuous functions on closed and bounded interval <p>The applications of mean value</p>



		theorem and Taylor's theorem
	MMC 306 Group Theory	<p>After completion of the course, a student will be able to</p> <ul style="list-style-type: none"> i) Understand the basic concepts of groups and links with symmetric figures ii) Learn concept of normal subgroup, cosets and quotient group; iii) Learn the concept of group homomorphism and isomorphism
	MMC 307 Multivariate Calculus	<p>After completion of the course, a student will be able to</p> <ul style="list-style-type: none"> i) The conceptual Variation when advancing in calculus from one variable to multivariable discussion ii) Inter-relationship amongst the line integral, double and triple integral formations. iii) Application of multi variable calculus tools in physics ,economics, optimization, and understanding the architecture of curves and surfaces in plane and space etc.
SEMESTER IV		COURSE OUTCOMES
CORE COURSE	MMC 408 Partial Differential Equation	<p>After completion of the course, a student will be able to</p> <ul style="list-style-type: none"> i) Formulate classify and transform partial differential equation into canonical form. ii) Solve linear and non-linear partial differential equations using various methods: and apply these methods in solving some physical problems
	MMC 409 Riemann Integration	<p>After completion of the course, a student will be able to</p> <ul style="list-style-type: none"> i) Some of the families and properties of Riemann integrable functions, and the applications of the



		<p>fundamental theorems of integration.</p> <p>ii) Beta and Gamma functions and their properties.</p> <p>iii) The valid situations for the interchangeability of differentiability and integrability within infinite sum, and approximation of transcendental function in terms of power series.</p>
	<p>MMC 410 Numerical Analysis</p>	<p>After completion of the course, a student will be able to</p> <p>i) Some numerical methods to find the zeroes of nonlinear functions of a single variable and solution of a system of linear equations, up to a certain given level of precision.</p> <p>ii) Interpolation techniques to compute the values for a tabulated function at points not in the table.</p> <p>iii) Applications of numerical differentiation and integration to convert differential equations into difference equations for numerical solutions.</p>
<p>SEMESTER V</p>		<p>COURSE OUTCOMES</p>
<p>CORE COURSE</p>	<p>MMC 511 Metric Space</p>	<p>After completion of the course, a student will be able to</p> <p>i) Understand the basic concepts of metric spaces and the concept such as open balls closed balls</p> <p>ii) Learn concepts of convergence of sequences, compactness, connectedness and their interrelations</p> <p>iii) Correlate the concepts of Metric Space with the Analytical concepts such as Continuity and uniform continuity.</p>



	MMC 512 Mechanics	<p>After completion of the course, a student will be able to</p> <ul style="list-style-type: none"> i) Deal with the kinematics and kinetics of the rectilinear and planar motions of a particle including the constrained oscillatory motions of particles. ii) Learn that a particle moving under a central force describes a plane curve and know the Kepler's laws of the planetary motions, which were deduced by him long before the mathematical theory given by Newton iii) Understand necessary conditions for the equilibrium of particles acted upon by various forces and learn the principle of virtual work for a system of coplanar forces acting on a rigid body.
DISCIPLINE SPECIFIC ELECTIVE (DSE) (Choose any one)	MME-501 A: Advanced Group Theory	<p>After completion of the course, a student will be able to</p> <ul style="list-style-type: none"> 1) Automorphisms for constructing new groups from the given group ii) External direct product that applies to data security and electric circuits. iii) Group actions, Sylow theorems and their applications to check nonsimplicity.
	MME-501B: Mathematical Modeling	<p>After completion of the course, a student will be able to</p> <ul style="list-style-type: none"> i) Know about power series solution of a differential equation and learn about Legendre's and Hessel's equations ii) Learn about various models such as Monte Carlo simulation models, queuing models and



		<p>linear programming models</p> <p>iii) Understand the basics of graph theory and learn about social networkko, Enierian and Hamiltonian graphs, diagram racing puzzles and knight's tour problem.</p>
	MME-501 C: Integral Transforms	<p>After completion of the course, a student will be able to</p> <p>Learn Fourier series, Euler's fommulae, Bessel's inequality, Fourier series in complex form.</p> <p>Know about piecewise continuous functions, Dirac's delta function, Laplace transforms and its properties.</p> <p>Solve ordinary differential equations using Laplace transforms</p> <p>Familiarise with Fourier transforms of functions belonging to class A. relation between</p> <p>Laplace and Fourier transforms.</p> <p>Explain Parneval's identity, Plancherel's theorem and applications of Fourier transforms to boundary value problems.</p>
SEMESTER VI		COURSE OUTCOMES
CORE COURSE	MMC 613 Complex Analysis	<p>After completion of the course, a student will be able to</p> <p>i) Understand the significance of differentiability of complex functions landing to the understoraling of Cauchy-Riemann equations</p> <p>ii) Evaluate the contour integrals</p>



		<p>and understand the role of Cauchy-Goursat theorem and the Cauchy integral formula.</p> <p>iii) Expand some simple functions as their Taylor and Laurent series, classify the nature of singularities, find residues and apply Cauchy Residac theorem to evaluate integrals.</p>
	<p>MMC 614 Ring Theory & Linear Algebra</p>	<p>After completion of the course, a student will be able to</p> <p>i) The fundamental concept of Rings. Fields, sahrings, integral domains and the corresponding morphisma.</p> <p>ii) The concept of linear independence of vectors over a field, the idea of a finite dimensional vector space, basis of a vector space and the dimension of a vector space.</p> <p>iii) Basic concepts of linear transformations, the Rank-Nollity Theorem, matrix of a linear transformation, algebra of transformations, change of basis, eigen values and eigen vectors, orthogonality spaces. Vector</p>
<p>DISCIPLINE SPECIFIC ELECTIVE (DSE)</p> <p>(Choose any one)</p>	<p>MME 602 A: Special Theory of Relativity & Tensors</p>	<p>After completion of the course, a student will be able to</p> <p>i) Understand the basic elements of Newtonian mechanics including Michelson-Modey experiment and geometrical interpretations of Lorentz, mansformation equations.</p> <p>ii) Learn about length contraction, time dilation and Loveatz contraction factor.</p> <p>iii) Study 4-dimensional Minkowskian space-time and its consequences.</p> <p>iv) Learn about transformation of co-</p>



		<p>ordinates, contravariant and covariant tensors</p> <p>v) Understand the algebraic operations of tensors, symmetric and skew-symmetric tensors</p>
	MME-602 B: Linear Programming and its Applications	<p>After completion of the course, a student will be able to</p> <p>Analyze and solve linear programming models of real life situations.</p> <p>The graphical solution of LPP with only two variables, and illustrate the concept of convex set and extreme points. The theory of the simplex method is developed.</p> <p>The relationships between the primal and dual problems and their solutions with applications to transportation, assignment and two-person zero-sum game problem</p>
SEMESTER VII		COURSE OUTCOMES
CORE COURSE		3.
		3.
DISCIPLINE SPECIFIC ELECTIVE (DSE) (Choose any one)	MME-602 C: Probability Theory and Statistics	<p>After completion of the course, a student will be able to</p> <p>i) Distributions to study the joint behavior of two random variables.</p> <p>ii) To establish a formulation helping to predict one variable in terms of the other, i.e. correlation and linear regression,</p> <p>iii) Central limit theorem, which helps to understand the remarkable fact that: the empirical frequencies of so many natural populations, exhibit a bell shaped curve.</p>
		4.
SEMESTER VIII		COURSE OUTCOMES
CORE COURSE		4.
		5.



DISCIPLINE SPECIFIC ELECTIVE (DSE)		
GENERIC ELECTIVE COURSES (GEC)	SEMESTER III	
	MMGE-301: QUANTITATIVE APTITUDE	<p>After completion of the course, a student will be able to</p> <ul style="list-style-type: none"> i) Gain sufficient ideas of mental and arithmetic abilities. ii) Handle mental/quantitative aptitude test questions with great ease. iii) Acquire the skill of solving problems of daily life quickly.
	SEMESTER IV	
	MMGE-402: BASIC TOOLS OF MATHEMATICS	<p>After studying this course, the student may understand</p> <ul style="list-style-type: none"> i) The basic concepts of Geometry and Vectors Analysis. ii) Some topics of Algebra and Differential Calculus. iii) Application of partial differentiation in daily life problems. iv) Properties and methods of Integration, solving of definite and indefinite integrals, v) Basic ideas of probability such as probability distribution, expectations, Binomial Distribution, Poisson distribution, etc.
	SEMESTER V	
	MMGE-503: RECREATIONAL MATHEMATICS	<p>After studying this course, the students will be able</p> <ul style="list-style-type: none"> i) To understand basic set theory, mathematical puzzles, beauty of figurate numbers and to solve real-life problems. ii) To understand CRT, Fermat's Little Theorem, Euler's Theorem, Wilson's Theorem, application of congruences, application of Mathematics in Nature, Geometric shapes, patterns, etc. iii) To understand the application of Number Theory in ISSN, ISBN, UPC, Credit card check and have a knowledge about some



		mathematicians viz, Ramanujan, Hardy, Erdos etxe.
SEMESTER VI		
	MMGE-604: Discrete Mathematics	After completion of the course, a student will be able to i) Understand the basic principles of logic, set theory, lattices and Boolean algebra. ii) Understand the ideas of basic counting techniques iii) Proficiently construct logical arguments and rigorous proofs



DEPARTMENT OF PHYSICS UNDER GRADUATE

PROGRAMME OUTCOMES

Students graduating with the B.Sc. Physics degree should be able to Acquire

1. A fundamental/systematic and coherent understanding of the academic field of basic Physics in areas like Mechanics, Electricity and Magnetism, Waves and Optics, Thermal and Statistical Physics, Quantum Mechanics, Mathematical Physics and their applications to other core subjects in Physics;
2. A wide ranging and comprehensive experience in physics laboratory methods in experiments related to mechanics, optics, thermal physics, electricity, magnetism, digital electronics, solid state physics and modern physics. Students should acquire the ability for systematic observations, use of scientific research instruments, analysis of observational data, making suitable error estimates and scientific report writing;
3. Procedural knowledge that creates different types of professionals related to the disciplinary/subject area of Physics, including professionals engaged in research and development, teaching and government/public service;
4. Knowledge and skills in areas related to their specialization area corresponding to elective subjects within the disciplinary/subject area of Physics and current and emerging developments in the field of Physics.
5. Demonstrate the ability to use skills in Physics and its related areas of technology for formulating and tackling Physics-related problems and identifying and applying appropriate physical principles and methodologies to solve a wide range of problems associated with Physics.
6. Recognize the importance of mathematical modelling, simulation and computational methods, and the role of approximation and mathematical approaches to describing the physical world and beyond.
7. Plan and execute Physics-related experiments or investigations, analyze and interpret data/information collected using appropriate methods, including the use of appropriate software such as programming languages and purpose-written packages, and report accurately the findings of the experiment/investigations while relating the conclusions/findings to relevant theories of Physics.
8. Demonstrate relevant generic skills and global competencies such as (i) problem-solving skills that are required to solve different types of Physics- related problems with well-defined solutions, and tackle open-ended problems that belong to the disciplinary area boundaries;
9. Investigative skills, including skills of independent investigation of Physics- related issues and problems;
10. Communication skills involving the ability to listen carefully, to read texts and research papers analytically and to present complex information in a concise manner to different groups/audiences of technical or popular nature.
11. Analytical skills involving paying attention to detail and ability to construct logical arguments using correct technical language related to Physics and ability to translate them with popular language when needed;
12. ICT skills;
13. Personal skills such as the ability to work both independently and in a group.

SEMESTER I		COURSE OUTCOME
CORE COURSE	PHY 501C: Mathematical Physics	1. To equip students with the mathematical and critical skills required in solving problems of interest to physicists.



		<ol style="list-style-type: none"> 2. Understand the concept of gradient of scalar, vector field divergence and curl of vector fields. 3. Perform line, surface and volume integration and apply Green's, Stokes' and Gauss's Theorems to compute these integrals. 4. Apply curvilinear coordinate problems with spherical and cylindrical symmetries. 5. In the laboratory course, the students will be able to design, code and test simple programs in C++ in the process of solving various problems.
	PHY 502C: Mechanics	<ol style="list-style-type: none"> 1. Understand laws of motion and their application to various dynamical situations. 2. Learn the concept of inertial reference frames and Galilean transformations. Also, the concept of conservation of energy, momentum, angular momentum and apply them to basic problems. 3. Understand translational and rotational dynamics of a system of particles. 4. Apply Kepler's laws to describe the motion of planets and satellite in circular orbit.
Ability Enhancement Compulsory Course VALUE ADDED COURSE	Hindi VAC01- EK BHARAT SHRESHTHA BHARAT VAC02- Special Education	
SKILL ENHANCEMENT COURSE (SEC)	PHY 202 A: Renewable Energy & Energy harvesting	<ol style="list-style-type: none"> 1. Demonstrate good comprehension of basic principles of electricity including ideas about voltage, currents and resistance.



		<ol style="list-style-type: none"> 2. to analyze and evaluate schematics of power efficient electrical circuits within elements while identifying current flow and voltage drop. 3. Gain knowledge about generators, transformers and electric motors. 4. Measure current, voltage, power in DC and AC circuits, acquire proficiency in fabrication of regulated power supply.
SEMESTER II		COURSE OUTCOMES
	PHY 503C: Electricity & Magnetism	<ol style="list-style-type: none"> 1. Demonstrate the application of Coulomb's law for the electric field, and also apply it to systems of point charges as well as line, surface, and volume distributions of charges.
	PHY 504C: Waves and Optics	<ol style="list-style-type: none"> 1. Understand Simple harmonic oscillation and superposition principle. 2. Understand different types of waves and their velocities: Plane, Spherical, Transverse, Longitudinal. 3. Understand Concept of normal modes in transverse and longitudinal waves: their frequencies and configurations. 4. Understand Interference as superposition of waves from coherent sources derived from same parent source. 5. Demonstrate basic concepts of Diffraction: Superposition of wavelets diffracted from aperture, understand Fraunhofer and Fresnel Diffraction.
SKILL ENHANCEMENT COURSE (SEC)	PHY 522: Renewable Energy & Energy Harvesting	<ol style="list-style-type: none"> 1. Knowledge of various sources of energy for harvesting 2. Understand the need of energy conversion and the various methods of energy Storage. A good understanding of various renewable energy systems, and



		<p>its components.</p> <ol style="list-style-type: none"> 3. Knowledge about renewable energy technologies, different storage technologies, distribution grid, smart grid including sensors, regulation and their control. 4. Design the model for sending the wind energy or solar energy plant.
Ability Enhancement Compulsory Course	AECC 202: Environmental Science	
VALUE ADDED COURSE	VAC 03: Culture VAC 04: Health Care	
SEMESTER III		COURSE OUTCOMES
CORE COURSE	PHY 505C: Mathematical Physics	<p>The students will be able to:</p> <ol style="list-style-type: none"> 1. Represent a periodic function by a sum of harmonics using Fourier series and their applications in physical problems such as vibrating strings etc. 2. Obtain power series solution of differential equation of second order with variable coefficient using Frobenius method. 3. Understand properties and applications of special functions like Legendre polynomials, Bessel functions and their differential equations and apply these to various physical problems such as in quantum mechanics. 4. Learn about gamma and beta functions and their applications. 5. Solve linear partial differential equations of second order with separation of variable method.
	PHY 506C: Thermal Physics	<ol style="list-style-type: none"> 1. Comprehend the basic concepts of thermodynamics, the first and the second law of thermodynamics. 2. Understand the concept of



		<p>entropy and the associated theorems, the thermodynamic potentials and their physical interpretations.</p> <ol style="list-style-type: none"> 3. Know about reversible and Irreversible processes. 4. Learn about Maxwell's relations and use them for solving many problems in Thermodynamics 5. Understand the concept and behavior of ideal and real gases. 6. Learn the basic aspects of kinetic theory of gases, Maxwell-Boltzmann distribution law, equipartition of energies, mean free path of molecular collisions, viscosity, thermal conductivity, diffusion and Brownian motion.
	PHY 507C: Digital System and Applications	<ol style="list-style-type: none"> 1. To build the concept of Integrated Chips (IC): its classification and uses. Differentiating the Analog and Digital circuits, the concepts of number systems like Binary, BCD, Octal and hexadecimal are developed to elaborate and focus on the digital system. 2. Sequential Circuits: Basic memory elements Flips-Flops, shift registers and 4-bit counters leading to the concept of RAM, ROM and memory organization.
VALUE ADDED COURSE	VAC 05:	
SEMESTER IV		COURSE OUTCOMES
CORE COURSE	PHY 508C: Mathematical Physics	<ol style="list-style-type: none"> 1. Determine continuity, differentiability and analyticity of a complex function, find the derivative of a function and understand the properties of elementary complex functions. 2. Work with multi-valued functions (logarithmic, complex power, inverse trigonometric



		<p>function) and determine branches of these functions.</p> <ol style="list-style-type: none"> 3. Evaluate a contour integral using parametrization, fundamental theorem of calculus and Cauchy' s integral formula. 4. Find the Taylor series of a function and determine its radius of convergence. 5. Determine the Laurent series expansion of a function in different regions, find the residues and use the residue theory to evaluate a contour integral and real integral. 6. Understand the properties of Fourier and Laplace transforms and use these to solve boundary value problems.
	<p>PHY 509C: Elements of Modern Physics</p>	<ol style="list-style-type: none"> 1. Main aspects of the inadequacies of classical mechanics as well as understanding of the historical development of quantum mechanics. Formulation of Schrodinger equation and the idea of probability interpretation associated with wave-functions. 2. The spontaneous and stimulated emission of radiation, optical pumping and population inversion. Three level and four level lasers. Ruby laser and He-Ne laser in details. Basic lasing 3. The properties of nuclei like density, size, binding energy, nuclear forces and structure of atomic nucleus, liquid drop model and nuclear shell model and mass formula. 4. Decay rates and lifetime of radioactive decays like alpha, beta, gamma decay. Neutrino, its properties and its role in



		<p>theory of beta decay.</p> <p>5. Fission and fusion: Nuclear processes to produce nuclear energy in nuclear reactor and stellar energy in stars.</p>
	PHY 510C: Analog System and Application	<p>1. Characteristics and working of pn junction.</p> <p>2. Two terminal devices: Rectifier diodes, Zener diode, photodiode etc.</p> <p>3. Designing of different types of oscillators and their stabilities.</p> <p>4. Ideal and practical op-amps: Characteristics and applications.</p>
SEMESTER V		COURSE OUTCOMES
CORE COURSE	PHY 511C: Quantum Mechanics and Application	<p>1. Methods to solve time-dependent and time-independent Schrodinger equation.</p> <p>2. Quantum mechanics of simple harmonic oscillator.</p> <p>3. Non-relativistic hydrogen atom: spectrum and eigenfunctions.</p> <p>4. Angular momentum: Orbital angular momentum and spin angular momentum.</p> <p>5. Bosons and fermions - symmetric and anti-symmetric wave functions.</p> <p>6. Application to atomic systems.</p>
	PHY 512C: Solid State Physics	<p>1. Elucidate the concept of lattice, crystals and symmetry operations.</p> <p>2. Understand the elementary lattice dynamics and its influence on the properties of materials.</p> <p>3. Describe the main features of the physics of electrons in solids: origin of energy bands, and their influence electronic behavior.</p> <p>4. Explain the origin of dia-, para-, and ferro-magnetic properties of solids.</p> <p>5. Explain the origin of the dielectric properties exhibited</p>



		<p>by solids and the concept of polarizability.</p> <p>6. Understand the basics of phase transitions and the preliminary concept and experiments related to superconductivity in solid.</p>
VALUE ADDED COURSE	VAC 06:	
DISCIPLINE SPECIFIC ELECTIVE (DSE) (Choose any one)	PHY 711: A. Physics of earth	<ol style="list-style-type: none"> 1. Have an overview of structure of the earth as well as various dynamical processes occurring on it. 2. Develop an understanding of evolution of the earth. 3. Apply physical principles of elasticity and elastic wave propagation to understand modern global seismology as a probe of the Earth's internal structure. 4. Understand the origin of magnetic field, Geodynamics of earth quakes and the description of seismic sources; a simple but fundamental theory of thermal convection; the distinctive rheological behaviour of the upper mantle and its top. 5. Explore various roles played by water cycle, carbon cycle, nitrogen cycles in maintaining steady state of earth leading to better understanding of the contemporary dilemmas (climate change, bio diversity loss, population growth, etc.) disturbing the earth
SEMESTER VI		COURSE OUTCOMES
CORE COURSE	PHY 513C: Electromagnetic Theory	<ol style="list-style-type: none"> 1. Apply Maxwell's equations to deduce wave equation, electromagnetic field energy, momentum and angular momentum density. Understand electromagnetic wave propagation in unbounded



		<p>media: Vacuum, dielectric medium, conducting medium, plasma.</p> <ol style="list-style-type: none"> 2. Understand electromagnetic wave propagation in bounded media: reflection and transmission coefficients at plane interface in bounded media. 3. Understand polarization of Electromagnetic Waves: Linear, Circular and Elliptical Polarization. Production as well as detection of waves in laboratory. 4. Learn the features of planar optical wave guide. 5. Understand the fundamentals of propagation of electromagnetic waves through optical fibres.
	<p>PHY 514C: Statistical Mechanics</p>	<ol style="list-style-type: none"> 1. Understand the concepts of microstate, macro-state, phase space, thermodynamic probability and partition function. 2. Understand the use of Thermodynamic probability and Partition function for calculation of thermodynamic variables for physical system (Ideal gas, finite level system). Difference between the classical and quantum statistics. 3. Understand the properties and Laws associated with thermal radiation. 4. Apply the Fermi-Dirac distribution to model problems such as electrons in solids and white dwarf stars 5. Apply the Bose-Einstein distribution to model problems such as blackbody radiation and Helium gas.
<p>DISCIPLINE SPECIFIC ELECTIVE (DSE)</p>	<p>PHY 713 : Physics of devices and Instrument</p>	<ol style="list-style-type: none"> 1. Develop the basic knowledge of semiconductor device physics and electronic circuits along



<p>(Choose any one)</p> <p>VALUE ADDITION COURSE</p>		<p>with the practical technological considerations and applications.</p> <ol style="list-style-type: none">2. Understand the operation of devices such as UJT, JFET, MOS, various bias circuits of MOSFET, Charge coupled Devices and Tunnel Diode.3. Learn to analyse MOSFET circuits and develop an understanding of MOSFET I-V characteristics and the allowed frequency limits.4. Learn the IC fabrication technology involving the process of diffusion, implantation, oxidation and etching with an emphasis on photolithography and electron-lithography.5. Apply concepts for the regulation of power supply by developing an understanding of various kinds of RC filters classified on the basis of allowed range of frequencies.6. Learn basic principles of phase locked loop (PLL) and understand its operation.
	VAC 608: History of Science	
SEMESTER VII		COURSE OUTCOMES
CORE COURSE	PHY 515C: Classical Mechanics	<ol style="list-style-type: none">1. to teach the students Classical Mechanics at a level more advanced than what they have learnt in B.Sc. This is a course which forms the basis of Physics of many areas of Physics.
	PHY 516C: Quantum Mechanics	<ol style="list-style-type: none">1. Students will learn the mathematical formalism of Hilbert space, hermitian operators, eigen values, eigen states and unitary operators,



		<p>which form the fundamental basis of quantum theory. Application to simple harmonic oscillators, hydrogen-like atoms and angular momentum operators will teach the students how to obtain eigen values and eigen states for such systems elegantly. The topic of density matrices that plays significant roles in quantum information theory and statistical mechanics will also help the students considerably.</p>
<p>DISCIPLINE SPECIFIC ELECTIVE (DSE) (Choose any one)</p>	<p>PHY 811: C. Astronomy and Astrophysics</p>	<ol style="list-style-type: none"> 1. Different types of telescopes, diurnal and yearly motion of astronomical objects, and astronomical coordinate systems and their transformations. 2. Brightness scale for stars, types of stars, their structure and evolution on HR diagram. 3. Components of Solar System and its evolution 4. The large-scale structure of the Universe and its history. 5. Distribution of chemical compounds in the interstellar medium and astrophysical conditions necessary for the emergence and existence of life.
<p>SEMESTER VIII</p>		<p>COURSE OUTCOMES</p>
<p>CORE COURSE</p>	<p>PHY 517C: Electrodynamics</p>	<ol style="list-style-type: none"> 1. to have a fair degree of familiarity with tensors and tensorial formulation of relativity and electrodynamics. In addition, the student's is expected to be able to solve problems of motion of charged particles in various field formations as well as find the radiation patterns from different time varying charge and current



		densities.
	PHY 518C: Electronics	1. to understand the design and functional performance of electronic circuits using various semiconductor devices. In addition, the student will understand the functional properties and characteristics of semiconductor devices in analog & digital circuits using analog and digital signals.
DISCIPLINE SPECIFIC ELECTIVE (DSE)	PHY 813: Atomic and molecular Physics	1. the details of atomic and diatomic molecular (diatomic) structures in terms of quantum mechanical treatment elaborately beyond the basic models. It will give the descriptions of fine structure of atoms and rotational, vibrational and electronic energies of molecules manifesting in their respective spectroscopies. The details of these spectroscopies would serve as the fundamentals for various concerned experimental results. The basic principles of light coherence as laser with their types and variants will also be covered exposing the students to the important modern spectroscopic tool.
GENERIC ELECTIVE COURSES (GEC)	SEMESTER III	
	PHGE 301 : Mechanics	<ol style="list-style-type: none"> 1. Understand the role of vectors and coordinate systems in Physics. 2. Learn to solve Ordinary Differential Equations: First order, Second order Differential Equations with constant coefficients. 3. Understand laws of motion and their application to various dynamical situations. 4. Learn the concept of inertial reference frames and Galilean transformations. Also, the



		<p>concept of conservation of energy, momentum, angular momentum and apply them to basic problems.</p> <ol style="list-style-type: none"> 5. Understand translational and rotational dynamics of a system of particles. 6. Apply Kepler' slaws to describe the motion of planets and satellite in circular orbit.
SEMESTER IV		
	<p>PHGE 402: Electricity and Magnetism</p>	<ol style="list-style-type: none"> 1. Gain the concepts of vector analysis. 2. Apply Gauss's law of electrostatics to solve a variety of problems. 3. Articulate knowledge of electric current, resistance and capacitance in terms of electric field and electric potential. 4. Calculate the magnetic forces that act on moving charges and the magnetic fields d to currents (Biot- Savart and Ampere laws). 5. Gain brief idea of dia, para and ferro-magnetic materials. 6. Understand the concepts of induction and self-induction to solve problems using Faraday's and Lenz's laws. 7. Have an introduction to Maxwell's equations.
SEMESTER V		
	<p>PHGE 503: Solid State Physics</p>	<ol style="list-style-type: none"> 1. Elucidate the concept of lattice, crystals and symmetry operations. 2. Understand the elementary lattice dynamics and its influence on the properties of materials. 3. Describe the main features of the physics of electrons in solids: origin of energy bands, and their influence electronic behaviour. 4. Explain the origin of dia, para,



		<p>and ferro-magnetic properties of solids.</p> <ol style="list-style-type: none"> 5. Explain the origin of the dielectric properties exhibited by solids and the concept of polarizability. 6. Understand the basics of phase transitions and the preliminary concept and experiments related to superconductivity in solid.
SEMESTER VI		
	<p>PHGE 604: Waves and Optics</p>	<ol style="list-style-type: none"> 1. Understand Simple harmonic oscillation and superposition principle. 2. Understand different types of waves and their velocities: Plane, Spherical, Transverse, Longitudinal. 3. Understand Concept of normal modes in transverse and longitudinal waves: their frequencies and configurations. 4. Understand Interference as superposition of waves from coherent sources derived from same parent source. 5. Demonstrate basic concepts of Diffraction: Superposition of wavelets diffracted from aperture, understand Fraunhofer and Fresnel Diffraction.
SEMESTER VII		
	<p>PHGE 705: Elements of Modern Physics</p>	<ol style="list-style-type: none"> 1. Main aspects of the inadequacies of classical mechanics as well as understanding of the historical development of quantum mechanics. 2. Formulation of Schrodinger equation and the idea of probability interpretation associated with wave-functions. 3. The spontaneous and stimulated emission of radiation, optical pumping and population



		<p>inversion. Three level and four level lasers. Ruby laser and He-Ne laser in details. Basic lasing.</p> <ol style="list-style-type: none"> 4. The properties of nuclei like density, size, binding energy, nuclear forces and structure of atomic nucleus, liquid drop model and nuclear shell model and mass formula. 5. Decay rates and lifetime of radioactive decays like alpha, beta, gamma decay. Neutrino, its properties and its role in theory of beta decay.
SEMESTER VIII		
	<p>PHGE 806: Nuclear and particles</p>	<ol style="list-style-type: none"> 1. to understand the basic properties of nuclei as well as knowledge of experimental determination of the same, the concept of binding energy, its various dependent parameters, N-Z curves and their significance 2. To appreciate the formulations and contrasts between different nuclear models such as Liquid drop model, Fermi gas model and Shell Model and evidences in support. 3. Knowledge of radioactivity and decay laws. A detailed analysis, comparison and energy kinematics of alpha, beta and gamma decays. 4. Familiarization with different types of nuclear reactions, Q-values, compound and direct reactions. 5. To know about energy losses due to ionizing radiations, energy losses of electrons, gamma ray interactions through matter and neutron interaction with matter. Through the section on accelerators students will acquire knowledge about



		<p>Accelerator facilities in India along with a comparative study of a range of detectors and accelerators which are building blocks of modern day science.</p> <p>6. It will acquaint students with the nature and magnitude of different forces, particle interactions, families of sub-atomic particles with the different conservation laws, concept of quark model.</p>
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**DEPARTMENT OF ZOOLOGY
UNDER GRADUATE**

PROGRAMME OUTCOMES

Program Learning Outcome

Students enrolled in B.Sc. (Hons.) degree program in Zoology will study and acquire complete knowledge of disciplinary as well as allied biological sciences. At the end of graduation, they should 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 should be able to identify, classify and differentiate diverse chordates and non- chordates based on their morphological, anatomical and systemic organization. They will also be able to describe economic, ecological and medical significance of various animals in human life which will be a great help when applying for Jobs in Institutes such as Zoological Survey of India and National Parks/Sanctuaries.

COURSE OUTCOMES:

SEMESTER I		COURSE OUTCOME
CORE COURSE	ZOO 101-C: ANIMALIA, NON-CHORDATES I: PROTOZOA TO NEMATHELMINTHES	<ul style="list-style-type: none"> • Understand the economic importance of non-chordates, their interaction with the environment, role in the ecosystem, evolutionary history and their relationships. • Having enhanced knowledge of the said group and communication skills through practical sessions, group discussions, assignments and projects
	ZOO 102-C: PRINCIPLES OF CLASSIFICATION, APPROACHES IN TAXONOMY	<ul style="list-style-type: none"> • Having knowledge of systematic position, habitat and structural organization of nonchordates. • Having enhanced knowledge of the said



		group and communication skills through practical sessions, group discussions, assignments and projects
SKILL ENHANCEMENT COURSE	ZOO 103 -S: AQUARIUM FISH KEEPING	<p>Upon completion of the course, students should be able to:</p> <ul style="list-style-type: none"> • Acquire knowledge about different kinds of fish, their compatibility in aquarium. • Become aware of Aquarium as commercial, decorative items and of scientific values. • Develop personal skills on maintenance of aquarium. • Know about the basic needs to set up an aquarium, i.e., dechlorinated water, reflector, filters, scavenger, aquatic plants etc. and the ways to make it cost-effective.
SEMESTER II		COURSE OUTCOME
CORE COURSE III	ZOO 201 – C Non-Chordates II: Annelida to Echinodermata, Minor phyla	<ul style="list-style-type: none"> • Appreciate the diversity of non-chordates living in diverse habit and habitats. • Understand evolutionary history and relationships of different non-chordates through functional and structural affinities. • Critically think about the organization, complexity and characteristic features of nonchordates.
CORE COURSE IV	ZOO 202 - C Animal Physiology, Endocrinology	<ul style="list-style-type: none"> • Know the basic fundamentals and understand advanced concepts so as to develop a strong foundation that will help them to acquire skills and knowledge to pursue advanced degree



		<p>courses.</p> <ul style="list-style-type: none"> • Comprehend and analyze problem-based questions on physiological aspects. • Recognize and explain how all physiological systems work in unison to maintain homeostasis in the body and use of feedback loops to control the same • Learn an integrative approach to understand the interactions of various organ systems resulting in the complex overall functioning of the body. Synthesize ideas to make connection between knowledge of physiology and real world situations, including healthy life style decisions and homeostatic imbalances • Know the role of regulatory systems viz. endocrine and nervous systems and their amalgamation in maintaining various physiological processes.
Skill Enhancement Course (SEC) -II	ZOO203–S(Vermicomposting)	<p>Upon completion of the course, students shall be able to:</p> <ul style="list-style-type: none"> • Learn about the history of Vermiculture. • Recognize various species of Earthworms in India, both exotic and indigenous races. • Be aware about the opportunities and employment in rural cottage industry. • Gain thorough knowledge about the techniques involved in Earthworm rearing and Vermicompost



		<p>preparation.</p> <ul style="list-style-type: none"> • Develop entrepreneurial skills necessary for self-employment in Vermicomposting.
SEMESTER III		
CORE COURSE V	ZOO 301 - C (Diversity of Chordates I: General organization of Chordates: Hemichordata to Pisces)	<p>Upon completion of the course, the students will be able to:</p> <ul style="list-style-type: none"> • Understand different classes of chordates, level of organization and evolutionary relationship between different subphyla and classes, within and outside the phylum. • Comprehend the circulatory, nervous and skeletal system of chordates. • Know about the habit and habitat of chordates in marine, freshwater and terrestrial ecosystems.
CORE COURSE VI	ZOO 302 - C (Diversity of Chordates II: General organization of Tetrapods: Amphibia to Mammalia)	<p>Upon completion of the course, the students will be able to:</p> <ul style="list-style-type: none"> • Appreciate similarities and differences in life functions among various groups of animals in Phylum Chordata. • Know about the habit and habitat of chordates in marine, freshwater and terrestrial ecosystems.
CORE COURSE VII	ZOO 303 - C (Fundamentals of Biochemistry)	<ul style="list-style-type: none"> • Students shall be able to Gain knowledge and skill in the fundamentals of biochemical sciences, interactions and interdependence of physiological and biochemical processes. • Get exposed to various processes used in industries and gain skills in techniques of



		<p>chromatography and spectroscopy.</p> <ul style="list-style-type: none"> • Demonstrate foundation knowledge in biochemistry; synthesis of proteins, lipids, nucleic acids, carbohydrates and their role in metabolic pathways along with their regulation. • Know about classical laboratory techniques, get acquainted with modern instrumentation, design, conduct scientific experiments, and analyze the resulting data. • Shall impart knowledge on the procedures and regulations in handling and disposal of chemicals.
Generic Elective Course - I	Zoo: 304 G I (Fundamentals of Zoology – 1: Introduction to Cells & Tissues, Chromosomes, Biomolecules)	<ul style="list-style-type: none"> • Provide knowledge about types of cells, cell division, cell cycle and types of tissues • Increase knowledge on structures of different biomolecules including nucleic acids and chromosomes
SEMESTER IV		
CORE COURSE VIII	ZOO 401 - C (Paleozoology, Zoogeography, Evolution)	<ul style="list-style-type: none"> • Having knowledge about the geological history, geological time scale and associated fauna. • Understand Fossils, their significance and dating, Zoogeographical region and their characteristic FAUNA. • Experience the characters of realms, continental drift, Barriers, Speciation etc. • Having knowledge on the evolutions by different forms of animals.



CORE COURSE IX	ZOO 402 - C (Histology & Comparative Anatomy of Vertebrates)	Upon completion of the course, students should be able to: <ul style="list-style-type: none">• Explain comparative account of the different vertebrate systems• Understand the pattern of vertebrate evolution, organization and functions of various systems.• Learn the comparative account of integument, skeletal components, their functions and modifications in different vertebrates.• Understand the evolution of heart, modification in aortic arches, structure of respiratory organs used in aquatic, terrestrial and aerial vertebrates; and digestive system and its anatomical specializations with respect to different diets and feeding habits.• Learn the evolution of brain, sense organs and excretory organs to a complex, highly evolved form in mammals;• Learn to analyze and critically evaluate the structure and functions of vertebrate systems, which helps them to discern the developmental, functional and evolutionary history of vertebrate species.• Understand the importance of comparative vertebrate anatomy to discriminate human biology.
CORE COURSE X	ZOO 403 - C (Ecology and Biodiversity)	Upon completion of course, students will be able to: <ul style="list-style-type: none">• Understand the key concepts in Ecology



		<p>including Physical factors and limiting factors.</p> <ul style="list-style-type: none"> • Comprehend the characteristics, dynamics, growth models and interactions of a Population. • Understand the ecosystem types, concepts, development and characteristics. • Know the food chains, food webs, energy models and ecological efficiencies. • Evaluate Biodiversity rich areas, threats and suggest remedial measures. • Inculcate scientific skills to evaluate experimental designs and analyze information. • Apply basic principles of ecology in conservation and management.
<p>Generic Elective Course - II</p>	<p>Zoology 404 G II (Fundamentals of Zoology – 2: Introduction to Animalia)</p>	<ul style="list-style-type: none"> • Having knowledge of animal identification, their habitat, phylum and structural organization • Understand economic importance of animals, their interaction with the environment, role in the ecosystem, evolutionary history and their relationships. • Enhanced knowledge of different groups, communication skills and parental care.



**DEPARTMENT OF ECONOMICS
UNDER GRADUATE**

SEMESTER		COURSE OUTCOME
CORE COURSE	BECC103: Introductory Microeconomics	<ol style="list-style-type: none"> 1. The students would have learned the basic principles of microeconomic theory, important terms and concepts used in microeconomics etc. 2. The working of the markets is explained in terms of demand and supply in the market. The concept of welfare is also dealt in the context of market operation. 3. The behavior of basic units in consumption and production respectively are explained in terms of key concepts in respective areas. 4. The students would have learned the market structures of a perfectly competitive and monopoly market via their equilibrium states and relevant government policies.
	BECC104: Mathematical Methods In Economics–I	<ol style="list-style-type: none"> 1. The students would have learned the preliminary building blocks to mathematical tools used in basic economic theory. 2. The students would have learned about the mathematical concepts like functions of real variable, characterizations of functions, integration and difference equations. 3. The students will see how these concepts appear in various economic models their significance in specific contexts. 4. The models are illustrations of methods of application of mathematical techniques to economic theory in general.
SEC	BECS102: Orange Economy	<ol style="list-style-type: none"> 1. Students will gain a clear understanding of what the Orange Economy is, including its history, key concepts, and the sectors it encompasses, such as music, film, design, fashion, architecture, and digital arts.



		<ol style="list-style-type: none"> 2. Assess how creative industries contribute to GDP, employment, and trade. 3. Learn how to turn creative ideas into sustainable business models.
SEMESTER II		COURSE OUTCOME
CORE COURSE	BECC203: Introductory Macroeconomics	<ol style="list-style-type: none"> 1. Students in this course will get familiarized with basic concepts of macroeconomics, its subject matter, its difference from microeconomics etc. 2. The students would have learned the basic concepts associated with the determination and measurement of aggregate macroeconomic variable like savings, investment, GDP, money, inflation, and the balance of payments. 3. The students would also have learned the basic structure of a classical and Keynesian system, how macroeconomic variables appear in them.
	BECC204: Mathematical Methods for Economics- II	<ol style="list-style-type: none"> 1. The students will learn the concepts of differential equations, linear algebra, functions of several real variables and multivariable optimization. 2. The students will be able to see how these mathematical concepts are used in building and interpretation of various economic models.
SEC	BECS202b: Contemporary Economic Issues	<ol style="list-style-type: none"> 1. Students will have the capability to understand government policies and will in general be informed participants in economic decision making.
SEMESTER III		COURSE OUTCOME
CORE COURSE	BECC301: Intermediate Microeconomics – I	<ol style="list-style-type: none"> 1. The students will learn the ways to analyze the behavior of individual agents through exposure to various microeconomic theories. 2. The students will be taken deeper understanding of the basic concepts through the mathematical tools taken up earlier. 3. Specifically the students would have studied the behavior of consumers and producers and that of a competitive firm.
	BECC302: Intermediate	<ol style="list-style-type: none"> 1. The students would have learned the



	Macroeconomics – I	<p>formal modelling of a macroeconomy in terms of analytical tools.</p> <ol style="list-style-type: none"> They would also have learned various alternative theories of output and employment determination in a closed economy in the short run as well as medium run and the role of policy in this context. Various theoretical issues related to an open economy would also have taught.
	BECC303: Statistical Methods for Economics	<ol style="list-style-type: none"> The students would have learned some basic concepts and terminology that are fundamental to statistical analysis and inference. The notion of probability, probability distributions of discrete and continuous random variables and of joint distributions would have been learned. They will be taught sampling techniques used to collect survey data as well as the notion of sampling distributions that act as a bridge between probability theory and statistical inference. They would also have learned some topics in statistical inference that include point and interval estimation.
GEC		
SEMESTER IV		COURSE OUTCOME
CORE COURSE	BECC401: Intermediate Microeconomics – II	<ol style="list-style-type: none"> The students would have learned the topics and concepts pertaining to general equilibrium and welfare, imperfect markets and topics under information economics. The basic concepts in behavioral economics would also have been taught.
	BECC402: Intermediate Macroeconomics – II	<ol style="list-style-type: none"> The students will learn the long run dynamic issues like growth and technical progress. The micro foundations to the various aggregate concepts are also provided to the students. The students will also learn the forms and elements in fiscal and monetary policy and various schools of



		macroeconomic thoughts in brief.
	BECC403: Introductory Econometrics	<ol style="list-style-type: none"> 1. The students would learn the basic econometric concepts and techniques and statistical concepts of hypothesis testing, estimation and diagnostic testing of simple and multiple regression models. 2. The course also teach the consequences of and tests for misspecification of regression models.
GEC	BECC404: Introductory Macroeconomics	
SEMESTER V		COURSE OUTCOME
CORE COURSE	BECC501: Indian Economy-I	<ol style="list-style-type: none"> 1. The students will try to understand the development path of India since independence as paradigm shifts and turning points in the growth path of India. 2. The very important topic of growth and distribution will also be taught. 3. The students will also learn about the change in the structure of institutions responsible for planning and growth of the country.
	BECC502: Development Economics-I	<ol style="list-style-type: none"> 1. The students will learn about the alternative conceptions of development and their justification. 2. The students will also learn aggregate models of growth and cross-national comparisons of the growth experience. 3. They will also learn definitions, measures and mechanisms concerning the topic of poverty and inequality required in going further deep into this topic. 4. They will also learn the role of the State in economic development and also the informational and incentive problem that affect the State governance.



DSE	BECD503a/b/c/d/e	
GEC	BECD504a: Indian Economy-I OR BECD504b: Money and Banking	
SEMESTER VI		COURSE OUTCOME
CORE COURSE	BECC601: Indian Economy-II	<ol style="list-style-type: none"> 1. The students will learn how the Indian economy was doing sector-wise, the shaping trends giving push to the overall growth to the economy. 2. The students will also get acquainted with the kind of policy debates in regard to sectoral push, their impact on people as well as on economic key indicators in India. 3. The students would also get a measure of performance of economy via empirical evidence.
	BECC602: Development Economics-II	<ol style="list-style-type: none"> 1. The students will learn the basic demographic concepts and their evolution during the process of development. 2. The problems of enforcement experienced in poor countries seen through the prism of structure of markets and contracts will be taught. 3. The governance of communities and organizations is studied and this is then linked to questions of sustainable growth. 4. The students will be taught on the role of globalization and increased international dependence on the process of development.
DSE	BECD803f/g/h	
GEC	BECD604a: Indian Economy-II	



	OR BECC604b: Economic History of India 1857-1947	
SEMESTER VII		COURSE OUTCOME
CORE COURSE	BECC701: International Economics	<ol style="list-style-type: none"> 1. The students would have learned the composition, direction, and consequences of international trade, and the determinants and effects of trade policy via models studied. 2. They would also be acquainted with the working of open economy macroeconomics where the focus is on national policies and international monetary fund. 3. They will also learn the causes and consequences of the rapid expansion of international financial flows in recent years. 4. The students will also be exposed to real world examples and case studies.
	BECC702: Public Finance	<ol style="list-style-type: none"> 1. The students would have learned the nature of government fiscal intervention and its implications for allocation, distribution and stabilization. 2. Specifically, they will learn about the government taxation and expenditure. 3. They will learn about other topics as well including public goods, market failures and externalities.
DSE	BECD503a/b/c/d/e	
GEC	BECC704: Environmental Economics	
SEMESTER VIII		COURSE OUTCOME
CORE COURSE	BECC801: The Economy of Manipur	<ol style="list-style-type: none"> 1. The students will be acquainted the economic history of Manipur from pre-colonial times. 2. Taking into account of its people, resource base and political set-ups at various junctures of time, the developmental path of the State since pre-colonial time will be taught.



	BECC802: Environmental Economics	<ol style="list-style-type: none"> 1. The students will learn the linkage of the current environmental problems of the world with economic factors. 2. The students will learn the application of economic principles to environmental questions and their management through various economic institutions, economic incentives and other instruments and policies. 3. The students will also get familiarized with economic implications of environment policies. 4. Concepts like valuation of environmental quality, quantification of environmental damages, inclusive cost-benefit analysis of projects, environmental impact analysis will also be taught.
DSE	BECD803f/g/h/i/j or Dissertation	
GEC	BECG804: Public Finance	

DSE

GROUP I		
Index No.	Title	COURSE OUTCOME
a	Political economy-I	<ol style="list-style-type: none"> 1. The students will learn the changes in the organisation of production, labour market institutions and corporate structure over time. 2. They will also learn about the consequences of globalization, especially of financial flows, for the role of the state, economic performance, gender issues, environment, human welfare and development.
b	Applied Econometrics	<ol style="list-style-type: none"> 1. The students will be equipped with tools and methods and skills required for empirical research in economics. 1. The students will learn topics such as specification and selection of regression models, dynamic econometric models, advanced methods in regression



		<p>analysis and panel data to hone their skills in empirical econometrics exercises.</p> <p>2. The students will also learn the software and computing skills of some popular and versatile softwares.</p>
c	Economic History of India (1857-1947)	<p>1. They will learn the key aspects of Indian economic development during the second half of British colonial rule.</p> <p>2. They will learn how the structure of the Indian economy was linked to the compulsions of colonial rule.</p>
d	Money and Financial Markets	<p>1. The students would have learned about the theory and functioning of the monetary and financial sectors of the economy.</p> <p>2. Specifically, they would have learned the organization, structure and role of financial markets and institutions.</p> <p>3. They will also learn concepts like interest rates, monetary management and instruments of monetary control.</p> <p>4. Financial and banking sector reforms and monetary policy with special reference to India will also be taught.</p>
e	Cultural Economics	<p>1. The students will learn the connection between cultural sector and economy.</p> <p>2. They will learn about the constituents or components of the cultural sector including the organizational set-up, their activities etc.</p> <p>3. They will be taught to see the workings and activities in the cultural sector through the prism of market operations.</p>
GROUP II		
Index No.	Title	COURSE OUTCOME
f	Political Economy-II	<p>1. They will learn the structure and institutions of capitalist economies and their relationship to social and political forces from different perspectives of alternative schools of thought.</p>



		<ol style="list-style-type: none"> 1. They would be exposed to recent commentaries as well as to some classical text in this field.
g	Comparative Economic Development (1850-1950)	<ol style="list-style-type: none"> 1. The students would have learned the economic systems followed by these selected countries namely US, USSR, UK and Japan. 1. They would have learned about the different trajectories and patterns of growth experienced by these diverse forms of economic systems and their outcomes on sectoral change, intersectoral relations, labour processes and industrial relations. 2. They would also have learned about the role of the State in facilitating the respective trajectories.
h	Financial Economics	<ol style="list-style-type: none"> 1. The students will learn the basic concepts associated with the economics of finance. 2. They will also learn about the benchmark valuation of assets and derivatives through CAPM model, Binomial Option pricing model etc. 3. They will also pick up the basic concepts in corporate finance.
i	Economics of Health and Education	<ol style="list-style-type: none"> 1. The students will learn the demand aspect for health and education, government intervention, inequity and discrimination issue in these two sectors within the microeconomics framework. 2. They will also learn the importance of education and health in raising the well being of a society.
j	Identity Economics	<ol style="list-style-type: none"> 1. The students will learn the salient features of identity economics. 2. They will also learn to analyze identity and norms in the utilitarian framework. 3. They will also study identity vis-à-vis economics of education. 4. The concept of gender and race is studied with respect to labour market, traditional economics of discrimination



		and identity theory.
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GEC

SEMESTER	Title	COURSE OUTCOME
III	BECG304: Introductory Microeconomics	<ol style="list-style-type: none"> 1. The students would have learned the basic principles of microeconomic theory, important terms and concepts used in microeconomics etc. 2. The working of the markets is explained in terms of demand and supply in the market. The concept of welfare is also dealt in the context of market operation. 3. The behavior of basic units in consumption and production respectively are explained in terms of key concepts in respective areas. 4. The students would have learned the market structures of a perfectly competitive and monopoly market via their equilibrium states and relevant government policies.
IV	BECG404: Introductory Macroeconomics	<ol style="list-style-type: none"> 1. Students in this course will get familiarized with basic concepts of macroeconomics, its subject matter, its difference from microeconomics etc. 2. The students would have learned the basic concepts associated with the determination and measurement of aggregate macroeconomic variable like savings, investment, GDP, money, inflation, and the balance of payments. 3. The students would also have learned the basic structure of a classical and Keynesian system, how macroeconomic variables appear in them
V	BECG504a: Indian Economy-I	<ol style="list-style-type: none"> 1. The students will try to understand the development path of India since independence as paradigm shifts and turning points in the growth path of India. 2. The very important topic of growth and distribution will also be taught. 3. The students will also learn about the



		<p>change in the structure of institutions responsible for planning and growth of the country.</p> <p>4. The various aspects of economy of North eastern region of India including main economic activities of the region, natural resources will also be taught in this course.</p>
	BECG504b: Money and Banking	<p>1. The students would have learned about the theory and functioning of the monetary and financial sectors of the economy.</p> <p>2. Specifically, they would have learned the organization, structure and role of financial markets and institutions.</p> <p>3. They will also learn concepts like interest rates, monetary management and instruments of monetary control.</p> <p>4. Financial and banking sector reforms and monetary policy with special reference to India will also be taught.</p>
VI	BECG604a: Indian Economy-II	<p>1. The students will learn how the Indian economy was doing sector-wise, the shaping trends giving push to the overall growth to the economy.</p> <p>2. The students will also get acquainted with the kind of policy debates in regard to sectoral push, their impact on people as well as on economic key indicators in India.</p> <p>3. The students would also got a measure of performance of economy via empirical evidence.</p>
	BECG604b: Economic History of India 1857-1947	<p>1. They will learn the key aspects of Indian economic development during the second half of British colonial rule.</p> <p>2. They will learn how the structure of the Indian economy was linked to the compulsions of colonial rule.</p>
VII	BECG704: Environmental Economics	<p>1. The students will learn the linkage of the current environmental problems of the world with economic factors.</p>



		<ol style="list-style-type: none">2. The students will learn the application of economic principles to environmental questions and their management through various economic institutions, economic incentives and other instruments and policies.3. The students will also get familiarized with economic implications of environment policies.4. Concepts like valuation of environmental quality, quantification of environmental damages, inclusive cost-benefit analysis of projects, environmental impact analysis will also be taught
VIII	BECG804: Public Finance	<ol style="list-style-type: none">1. The students would have learned the nature of government fiscal intervention and its implications for allocation, distribution and stabilization.2. Specifically, they will learn about the government taxation and expenditure.3. They will learn about other topics as well including public goods, market failures and externalities.