Digboi College ডিগবৈ মহাবিদ্যালয়
ESTD 1965
Itavata, Digboi, Assam - 786171
Phone & Fax: 03751-264416 Email: digboicollege@yahoo.com Website: digboicollege.edu.in

2.6.1 Course Outcomes (CO)

4th Cycle NAAC Accreditation

Submitted

to

THE NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

AQAR–2023-2024

Digboi College, Digboi

DEPARTMENT OF ASSAMESE

BA PROGRAMME WITH MAJOR IN ASSAMESE

CHOICE BASED CREDIT SYSTEM

Sl No.	Semester	Course Name andCode	Course Outcome
1	I	Course Code – AECC.CourseTitle-CommunicativeAssamese.	Thiscourseispreparedtoprovidetheknowledgeofperfectcommunication.
		Course Code – C1.CourseTitle:History ofAssamese Literature(from the beginning topost Sankardevaperiod).	Studentswillgettheknowledgeofdifferent periods of Assamese literature.It also provides the detailed concept ofAssamese literature from the beginningtopostSankardevaperiod.
		Course Code – C2.CourseTitle:History ofAssamese Literature(From the Arunudoy torecenttime).	The course is prepared to provide theconcept of the trends and tendencies ofmodernAssameseliteraturefromArunudoy torecent.
2	II	Course Code – C3.Course Title:Introductionto Linguistics.	Thiscourseispreparedtogiveanintroductoryideaoflanguagesystemsandlinguistics.
		Course Code – C4.Coursetitle:Poetics.	Thiscourseispreparedtogivetheprimaryknowledgeof Indianandwesternpoetics.

3	III	Coursecode–C5. Course Title:Literarycriticism. Courses Code – C6.Course Title: SelectionfromAsames epoetry. Course Code - C7.Course Title: Studies ontheCultureofAssam.	The course is prepared to learn variousaspectsofliterarycriticism. This course is prepared to give theconcept of the history of Assamesepoetry as well as the characteristics anddiversity of Assamese poetry. Throughthis course students will get an ideaabout the development of Assamesepoetry from early period to modernperiod. The course is prepared to give the ideaofcultureasawholeandvariousaspect s and characteristics of Assameseculture.
4	IV	Course Code - C8. TotalCourseTitle-TheoryandpracticeofCo mparativeliterature. CourseCode– C9.TotalCourseTitle-Indo-AryanLanguagesandAss amese. Course Code – C10. .CourseTitle - SelectionfromAssamese prose.	This course is prepared to provide theideaofcomparativeliteratureandtheove rallconceptofcomparativeIndianliterature. This course is prepared to provide theknowledge of the evolution of Indo-AryanLanguagestohighlightthecharacteri sticsofSanskritandPali-Prakritlanguages,selectedtextsaregiven. Thiscoursewillgiveaclearconcept of the origin and development ofAssameselanguageandAssamesegra mmar. Thiscourseispreparedtogivetheconcept of the evolution, characteristicsand diversity of Assamese fictional andnon-fictionalprose.

5	V	CourseCode– C11.Course Title - AssameseDrama.	Thiscoursewillhelpthestudentstoacquiretheknowledgeof AssameseDramaandevolutionofAssamesetheatreandstage.
		CourseCode– C12.CourseTitle– Studieson Assamese Language.	Thiscourseispreparedtogivetheconceptofphonology,morphology,syntax, synonyms and word formation ofAssameseLanguage.
		Course Code – DSE 1.Objective:AssameseGrammar,LexiconandIdiomatic Usage.	This course is prepared to provide theknowledgeofperfectpronunciationofAssameselanguage,properuseofAssamese GrammarandLexiconandIdiomatic Usageetc.
		CourseCode- DSE2.Course Title - IntroductiontoIndianliterature.	this course is prepared to give an ideaabout Indian Literature through varioustexts.
6	VI	CourseCode– C13..Course Title – SelectionfromAssamese Prose.	Thiscourseispreparedtogivetheconcept of the evolution, characteristicsand diversity of Assamese fictional andnon-fictionalprose.
		CourseCode– C14.Course Title - LanguageandscriptofAssam.	This course is prepared to provide theknowledgeoflanguageanddialects,linguisticspecification,Scriptsandlanguageexchangesin Assam.
		CourseCode- DSE3.Course Title - Introductiontoworldliterature.	This course is prepared to give an ideaabout the concept ofWorld Literaturethroughvarioustexts.
		CourseCode– DSE4.Total Marks – 100(80+20).Course Title- SpecialAuthor.Objective:	This course is prepared for studying thelifeandliteraryworkofaspecialAssameseauthor.

FYUGP(NEP)			
SEMESTER	**COURSE CODE & NAME**	**COURSE OBJECTIVES**	**COURSE OUTCOMES**
I	C1: অসমীয়াভাষাআৰুলিপৰপিৰচয়মূলকইতিহাস (Introduction to History of Assamese Language and Script)	১. অসমতচিলতভাষাসমূহৰসাধাৰণপিৰচয়দানকৰা। ২. অসমীয়াভাষাআউপভাষাসেকছা-ছাসকলকআভাসদয়া। ৩. অসমীয়াভাষাআআযিভভাষাসমূহৰভাষিকউপাদানসমূহৰআদান- দানসেকপিৰচয়আগবেঢ়ৱা। ৪. অসমীয়ালিপআঅসমৰঅনানভাষাৰিলিপসমূহৰপিৰচয়দানকৰা।	CO 1: অসমতচিলতভাষাসমূহৰসাধাৰণপিৰচয়দানকৰাহ'ব। ILO 1: অসমতচিলতবিভআযমূলীয়ভাষাৰপিৰচয়লাভকিৰব। ILO 2: অসমতচিলতবিভআযমূলীয়ভাষাসমূহৰবাদণ্ডিবিভআযভভাষাসমূহৰবষেয়ওধাৰণালাভকিৰব। CO 2 :অসমীয়াভাষাআউপভাষাসকছা-ছাসকলকআভাসদয়াহ'ব। ILO 1: অসমীয়াভাষাৰভাষাতাকবিশসমূহৰসকজানবপাৰব। ILO 2: অসমীয়াভাষাৰভৗগালকআনুগীয়ঔপভাষিকUবিচø সেকজািনবপািৰব। CO 3 :অসমীয়াভাষাআআযিভভাষাসমূহৰভাষিকউপাদানসমূহৰআদান- দানসেকপিৰচয়আগবেঢ়ৱাহ'ব। ILO 1: আযিভভাষাসমূহৰৈসেতঅসমীয়াভাষাৰভাষকউপাদানসমূহৰআদান- দানসেকঅৱগতহ'ব। CO 4 :অসমীয়ািলিপআঅসমৰঅনানভাষাৰিলিপসমূহৰপিৰচয়দানকৰাহ'ব। ILO 1: অসমীয়ািলিপআঅসমতচিলতবিভভাষাৰিলিপসমূহৰপিৰচয়লাভকিৰব।

DEPARTMENT OF ECONOMICS

BA PROGRAMME WITH HONOURS IN ECONOMICS

(CBCS)

COURSE OUTCOME

COURSE CODE	COURSETITLE	COURSEOUTCOME
ECNHC101	Introductory Microeconomics	Thiscourseisdesignedtoexposethestudentstothebasic principlesofmicroeconomictheory.
ECNHC102	Mathematical Methods forEconomics –I	Theobjectiveofthissequenceistotransmitthebodyofbasicmathematicsthatenablesthestudyofeconomictheoryattheundergraduatelevel, specificallythecoursesonmicroeconomictheory,macroeconomictheory,statisticsand econometricssetoutinthissyllabus.
ECNHC201	IntroductoryMacroeconomics	ThiscourseaimstointroducethestudentstothebasicconceptsofMacroeconomics.Thiscoursediscussesthepreliminary concepts associatedwiththe determination andmeasurementofaggregate Macroeconomicvariableslikesavings,investment,GDP, money,inflationandthebalanceofpayments.
ECNHC202	Mathematical Methods forEconomics -II	The objective of this sequence is to transmit the body of basicmathematics that enables the study of economic theory at theundergraduatelevel,specificallythecourses on microeconomic theory, macroeconomic theory, statistics andEconometricssetoutinthisSyllabus.
ECNHC301	EssentialsofMicroeconomics	The course is designed to provideasoundtraininginmicroeconomictheorytoformallyanalyzethebehaviourofindividualagents.This Course looks at the behavior of the consumer and the producer andalsocoversthebehaviourofacompetitivefirm.
ECNHC302	EssentialsofMacroeconomics	Thiscourseintroducesthestudentstoformalmodelingofamacro-economyintermsofanalyticaltools.Itdiscussesvariousalternativetheoriesofoutputandemploymentdeterminationinaclosedeconomyintheshortrunaswell asmediumrun,andtheroleofpolicyinthiscontext.Italso introducesthestudentstovarioustheoreticalissuesrelatedtoanopeneconomy.
ECNHC303	StatisticalMethodsforEconomics	Thisisacourseonstatisticalmethodsforeconomics.Itbeginswithsomebasicconceptsandterminologythatarefundamentaltostatisticalanalysisandinference.Itthendevelopsthe notionofprobability,followedbyprobabilitydistributionsofdiscreteandcontinuousrandomvariablesandofjointdistributions.Thisisfollowedbyadiscussionon samplingtechniquesusedtocollectsurveydata.
ECNHC401	Advanced Microeconomics	ThiscourseisasequeltoEssentialsofMicroeconomics.The emphasiswillbeongivingconceptualclaritytothestudent
		coupledwiththe use ofmathematicaltoolsandreasoning. Itcoversgeneralequilibriumandwelfare,imperfectmarketsand topicsunderinformationeconomics

ECNHC402	AdvancedMacroeconomics	ThiscourseisasequeltoEssentialsofMacroeconomics.Inthiscourse,thestudentsareintroducedtothelongrundynamicissueslikegrowthandtechnical progress.Italsoprovidesthe micro-foundations tothe various aggregative concepts usedinthepreviouscourse.
ECNHC403	IntroductoryEconometrics	Thiscourse providesacomprehensiveintroductiontobasiceconometricconceptsandtechniques.Itcoversstatisticalconceptsofhypothesistesting,estimationanddiagnosticcheckingofsimpleandmultipleregressionmodels.Thecoursealsocoverstheconsequencesofandtestsformisspecification ofregressionmodels.
ECNHC501	IndianEconomy-I	Usingappropriate analytical frameworks, this coursereviewsmajortrendsineconomicindicatorsinIndiainthepost-Independenceperiod,withparticularemphasisonparadigmshiftsandturning points.
ECNHC502	DevelopmentEconomics-I	Thisisthefirstpartof atwo-partcourseoneconomicdevelopment.Thecoursebeginswithadiscussionofalternativeconceptionsofdevelopmentandtheirjustification.Itthenproceedstoaggregatemodelsofgrowthandcross-nationalcomparisonsofthegrowthexperiencethatcanhelp evaluatethesemodels.
ECNHC601	IndianEconomy-II	Thiscourseexamines sector-specificpolices andtheir impactinshapingtrendsinkeyeconomicindicatorsinIndia.Emphasis needstobegivenincapturingtheemergingissues.
ECNHC602	Development Economics-II	ThisisthesecondmoduleoftheeconomicdevelopmentsequenceItbeginswithbasicdemographicconceptsandtheirevolutionduringtheprocessofdevelopment.Thestructureofmarketsandcontractsislinkedtotheparticularproblemsofenforcement experiencedinpoor countries.Thegovernanceofcommunitiesandorganizationsisstudiedandthisisthenlinkedtoquestionsofsustainablegrowth.Thecourse ends withreflections ontheroleofglobalizationandincreasedinternationaldependenceontheprocessofdevelopment.
ECNHDSE505	Money andFinancial Markets	Thiscourseexposesstudentstothetheoryandfunctioningofthemonetaryandfinancialsectorsoftheeconomy.Ithighlightstheorganization,structureandroleoffinancialmarketsandinstitutions.Italsodiscussesinterestrates,monetarymanagementandinstrumentsofmonetarycontrol.Financialandbankingsectorreformsandmonetary policywith specialreferencetoIndiaarealsocovered.
ECNHDSE506	PublicEconomics	Thepaperdealswiththenatureofgovernmentintervention anditsimplicationsforallocation,distributionandstabilization.
ECNHDSE602	Environmental Economics	Thiscourseaimstofocus oneconomiccausesof environmentalproblems;inparticular,howeconomicprinciplesare appliedtoenvironmental questionsandtheirmanagement throughvarious economicinstitutions, economicincentivesandotherinstrumentsandpolicies.Italsoaimstoaddress Economicimplicationsofenvironmentalpolicyaswellasvaluationof environmentalquality,quantificationofenvironmentaldamages,toolsforevaluationofenvironmentalprojectssuchascost-benefitanalysisandenvironmental impactassessments.

ECNHDSE605	Historyof Economic Thought	Theobjectiveofthiscourseistoacquaintthelearners withthe historicaldevelopmentsintheeconomicthoughtspropoundedby differentschools.

FYUGP(NEP)			
SEMESTER	**COURSE CODE & NAME**	**COURSE OBJECTIVES**	**COURSE OUTCOMES**
I	ECOC1: Introductory Microeconomics	The objectives of this Course are: 1. To expose students to the basic principles of microeconomic theory. 2. To enlighten the learners about the fundamental economic trade-offs and allocation problems due to scarcity of resources.	On completion of this Course, a student will be able to – CO 1: Comprehend the introductory principles of Microeconomics. LO 1.1: Define the meaning of Microeconomics. LO 1.2: Discuss how scarcity and the need to make choices are central to economic analysis. LO 1.3: Identify and analyze the trade-offs and opportunity costs in decision-making processes. CO 2: Apply the basics of microeconomics in behaviour patterns of firms and households and relate with the laws of demand and supply. LO 2.1: Explain the law of demand, determinants of demand, individual and market demand and shift in demand. LO 2.2: Explain the law of supply, determinants of supply, individual and market supply and shift in supply. CO 3: Apply the fundamentals of microeconomics to understand the behaviour of consumers and attainment of consumer‟s equilibrium. LO 3.1: Define budget constraint. LO 3.2: Explain the meaning and properties of an Indifference curve.

			CO 4: Apply the principles of microeconomics in relation to production function, costs and revenues and demonstrate the basics of market mechanism and the equilibrium condition of different forms of markets. LO 4.1: Define the basics of a firm under perfectly competitive market structure. LO 4.2: State the relation between revenue, cost and equilibrium under perfect competition. LO 4.3: Explain the characteristics of firms under imperfect market structure. CO 5: Evaluate the features of input market. LO 5.1: Explain the features of firms using one and two variable factors respectively in the short run and long run labour market. LO 5.2: Discuss the determination of rent and profit maximizing condition in input market LO 5.3: Explain the fundamentals of capital market.

DEPARTMENT OF EDUCATION

BA PROGRAMME WITH HONOURS IN EDUCATION

(CBCS)

COURSE OUTCOME

COURSE CODE	COURSETITLE	OBJECTIVE/Outcome
EDNH101	PhilosophicalFoundations ofEducation	Oncompletionofthecourse,studentswillbeable to - describethemodernconcepts,aims,functionsandroleofphilosophyandroleofeducation - ExplainthebasictenantsofthegivenIndianandwesternphilosophiesandtheirinfluenceon education -appraisethecontributionofgiven philosophersinthedomainofeducation
EDNH102	SociologicalFoundationsofEducation	Oncompletionofthecourse,studentswillbeable to -explainthe concept, approaches andtheoriesofeducationalsociology - illustratesocialaspects,progressandroleofeducation -describevarioussocialgroups,political ideologiesandtheirbearingsoneducation
EDNH201	PsychologicalFoundations ofEducation	Oncompletionofthecourse,studentswillbeable to - explaintheconcept,nature,scopeandusesofpsychologyineducation - explaintheinfluenceofgrowthanddevelopmentineducation - describethemeaning,concept,variables,typesandtheories oflearning -discuss the concept andof theories oflearning andcreativity - explainthemeaning,concept,factorsandtheoriesofpersonality -describetheconceptofmentalhealth andmentalhygiene
EDNH202	Educational AdministrationandManagement	Oncompletionofthecourse,studentswillbeable to - explaintheconcept,typesandprinciplesofeducationalmanagementand

		educationalleadership -define theconcept of educationalplanninganditsimportance -analysetheroleandimportanceof educationalsupervision
EDNH301	Great Educators andEducationalThoughts	Oncompletionofthecourse,studentswillbeableto -describethecontributionandrelevance ofthegivenphilosophersandtheired ucationalthoughts
EDNH302	MeasurementandEvaluationinEducation	On completion of the course, students willbeableto -explain the meaning, nature, scope, needand types of measurement and evaluationineducation - describethemeaningofpsychologicaltest,th eircharacteristicsandprocessofconstruction - describesomespecifictoolstomeasureachiev ement,intelligence,personalityandaptitude -describethemeaningandnatureof various statistical measures andtheiruses.
EDNH303	ExperimentalPsychologyandLaborat ory Practical	Oncompletionofthecourse,studentswillbeableto - explaintheconcept,scopeandneedofexpe rimentalpsychology - conductandreportofpsychologicalexperimen ts - describethemeaningandnatureofme moryanditsrelatedconcepts -explainattentionandrelatedpractical -explaintheconcept,theories andmethodsoflearningandrelatedpractical
EDNH401	EducationinPreindependentIndia	Oncompletionofthecourse,studentswillbeableto - explaintheconceptofeducationinthecontext ofIndianheritage - criticallyexamineandevaluateeducationint he ancient,medievalandBritishIndia
EDNH402	TechniquesofTeaching	Oncompletionofthecourse,studentswillbeableto - explainthemeaning,natureandprinciplesoft eaching -understandroleofteacher,lesion

		planning, teaching andmicroteachingskills -objective, methodand approaches ofteachingindifferentlevelofeducation
EDNH4020	TeachingPractice	Oncompletionofthecourse,studentswillbeableto - demonstrateandintegrateteachingskillinclassro om
EDNH403	EducationalTechnology	Oncompletionofthecourse,studentswillbeableto - describetheconcept,natureandcomponentsofed ucationaltechnology -distinguish betweeneducationaltechnologyandinstructiona ltechnology -applyICTinteachinglearning -describetheconcept,component, characteristicsofeffectivecommunication
EDNH501	EducationinpostindependentIndia	Oncompletionofthecourse,studentswillbeableto -describetheeducationalscenarioatthetime ofindependence -describetherecenteducational developmentinIndia
EDNH502	Educationinworldperspective	Oncompletionofthecourse,studentswillbeableto - explainthemeaning,nature,scope,purposeandme thodsofcomparativeeducation -explainthe organization, administration,objectivesandexaminationsystem ofdifferent countries -explainopeneducationinworld perspective
EDNH601	EmergingtrendsinIndianeducation	Oncompletionofthecourse,studentswillbeableto -explainthe need of constitutionalprovisionforeducation -identifythe challenges of Indianeducation -explainthepoliticalandinternational influenceoneducation
EDNH602	Childandadolescentpsychology	Oncompletionofthecourse,studentswillbeableto -explainthesignificanceofthestudy - describethedevelopmentchangesofadolescencea ndchildhood -explaintheroleofsocietyinthisregard

DSEED501	GuidanceandCounseling	Oncompletionofthecourse,studentswillbeableto -describemeaning,nature,purpose,scope, principles, types, areas,characteristicsandfunctionsofguidancea ndcounseling -explainthequalitiesandroleofa counselor
DSEED502	ValueEducation	Oncompletionofthecourse,studentswillbeableto - explaintheconcept,importanceandneedofval ue education -explainthepromotionofvaluethrougheducation
DSEED503	InclusiveEducation	Oncompletionofthecourse,studentswillbeableto -explaintheconcept,needandimportance of special education,integratededucation,inclusiveeduca tion -describepolicyperspectivetowards educationofsociallydisadvantagedsection
DSEED504	MentalHealthIssues	Oncompletionofthecourse,studentswillbeableto - explaintheneedandimportanceofmentalhealthi ssuesinemergingsociety -roleof differentagenciesinthisregard -describe variouscomponent of positivepsychology -integrateyogainday-to-daylife
DSEED601	HumanRightsEducation	Oncompletionofthecourse,studentswillbeableto - explainthedefinition,nature,scope,theoriesandco nstitutionalperspectiveofhumanrights - describemethodsandactivitiesofteachin g humanright education -explaintheroleofdifferentagencies
DSEED602	Economics ofEducation	Oncompletionofthecourse,studentswillbeableto - describemeaning,scopeandimportanceofecono micsofeducation -explainthehistoricaldevelopment -explaindifferenttypesofeducational cost
DSEED603	GenderandEducation	Oncompletionofthe course,studentswill beableto
		- explainthemeaningandnatureofgenderandits relatedconcepts - describethegenderissuesrelatedtoschoole ducation - analysethelawsandpoliciesrelatedtogenderequali ty

DSEED604	ProjectWork	Oncompletionofthecourse,studentswillbeableto -prepareaprojectreport

FYUGP(NEP)			
SEMESTER	**COURSE CODE & NAME**	**COURSE OBJECTIVES**	**COURSE OUTCOMES**
I	EDNC1: Foundations of Education-I	This course aims to familiarize the students with the meaning, nature, scope and types of Education and the aims and functions of education based on the four pillars of education. The course also aims to develop an understanding of the concepts of Psychology and Educational Psychology, different schools of Psychology and methods of Educational Psychology. The course will develop an understanding of the meaning, nature and scope of Philosophy, Educational Philosophy, Sociology and Educational Sociology. This course will develop and understanding of the role of Philosophy in different aspects of Education. The course also aims to familiarize the students with the conflict and consensus theories of Educational Sociology.	The students will be able to – CO1: Explain the meaning, nature, scope and types of Education LO 1.1: explain the modern concept of Education and its scope LO 1.2: describe the types of Education LO 1.3: explain the aims and functions of Education based on four pillars of Education LO 1.4: discuss the functions of Education in Human life and National life CO2: Explain the meaning, nature and scope of Psychology and Educational Psychology LO 2.1: describe the concept and branches of Psychology LO2.2: explain the schools of Psychology LO 2.3: describe the concept and scope of Educational Psychology LO 2.4: describe the methods of Educational Psychology LO 2.5: discuss the application of Educational Psychology in teaching learning process CO3: Explain the meaning, nature and scope of Philosophy and Educational Philosophy LO 3.1: explain the concept and scope of

			Philosophy LO 3.2: discuss the relationship between Education and Philosophy LO 3.3: describe the concept and scope of Educational Philosophy LO 3.4: discuss the role of Philosophy in different aspects of Education. CO4: Explain the meaning, nature and scope of Sociology and Educational Sociology LO 4.1: explain the concept and scope of Sociology LO 4.2: discuss the relationship between Education and Sociology LO 4.3: discuss the need of Sociological approach to Education LO 4.4: explain the concept and scope of Educational Sociology LO 4.5: explain the conflict and consensus theories of Educational Sociology.

DEPARTMENT OF ENGLISH

BA PROGRAMME WITH HONOURS IN ENGLISH

(CBCS)

COURSEOUTCOME

COURSECODE	COURSETITLE	OBJECTIVE
English-C-I	**INDIANCLASSICALLITERATURE**	Theobjectiveofthiscourseistoacquaintthestudentswiththerichculturalheritageofancient Indianliterature,especiallySanskritLiterature. Indianclassicalliteraturecanclaimtherare distinctionofattainingthesummit ofcreativeexcellence andartistic/aestheticsensibility,especiallyinSanskritintheimmortalplays ofKalidasa,theepics*TheRamayana*and*TheMahabharata*,Shudraka's*Mrcchakatika,* amongothers.AlthoughSrimantaSankaradevaofAssamcannotberegarded as'classical'fromthepurviewoftemporality,hisworksarecharacterised byclassicalsensibilitiesandinthecontextofAssameseliteratureandculture,hisworks areheldasimmortalclassics.Therefore,Sankardeva'sinclusioninthiscourseisdeterminedbyhisworks'timelessappealandrelevance.Oneofhis famousplays*ParijataHarana*hasbeenincluded.
English-C-2	**EUROPEANCLASSICALLITERATURE**	EuropeanClassicalliteratureimpliestheliteratureof ancientGreeceandRome.Thestudy of'ancientGreekliterature'impliesastudy ofliteraturewritteninGreekinthepre-Christianperiod,bynon-Christiansinthefirstsixcenturiesof theChristianera.Romanliterature,writtenintheLatinlanguageremainsanenduringlegacyoftheculture ofancientRome.Latinliteraturedrewheavilyonthetraditionsofothercultures,particularlythemorematureliterarytraditionofGreece,andthestronginfluenceofearlierGreekauthorsareseen.The purposeofthiscourseistoacquaintlearnerswiththegreatheritageof Europeanclassicalliterature,startingfromHomer'sepic*TheIliad*tothesatiresofHorace.Theimportanceofthiscourserestsonthefactthat Englishliteratureisheavilyindebtedtotheclassicalworksof GreeceandRome.Whetheritistragedyorcomedy,satireorcriticism,epicorlyric,theinfluenceofclassicalliteratureintheworksoftheEnglishauthorsisclearlyinevidence.Therefore,learnerswillbeacquaintedwithimmortalclassicslike*TheIliad*and*Metamorphosis*,theygettolearnaboutthedifferencebetweentheGreek classicsandthe Latinclassics, the different genres dabbledinbytheclassicalwriters,suchas,tragedy,comedy,epic,satire, criticismandsoforth

English-C-3	**INDIANWRITINGINENGLISH**	IndianWritinginEnglishreferstothebodyofwork bywritersinIndiawhowriteEnglishandwhosenativelanguagecouldbeoneofthenumerouslanguagesofIndia.Itisalsoassociatedwiththeworks ofmembers oftheIndianDiaspora.Asacategory,thisproductioncomesunderthebroaderrealmofpostcolonial literature- theproductionfrompreviouslycolonizedcountriessuchasIndia.IndianEnglishLiteratureisanhonest enterprisetodemonstratetheeverraregemsof IndianWritinginEnglish.Frombeingsingularandexceptional,rathergradualnativeflare-upofgeniuses,IndianWritinginEnglishhasturnedouttobeanewformofIndiancultureandvoiceinwhichIndiaconversesregularly. IndianWriters- poets,novelists,essayists,anddramatistshavebeenmakingmomentousandconsiderablecontributionstoworldliteraturesincepre-Independenceera,thepastfewyearshavewitnessedagiganticprospering andthrivingofIndianEnglishWritingintheglobalmarket.IndianEnglish Literaturehasattainedanindependentstatusintherealmofworld Literature.Widerangesofthemes aredealtwithinIndianWritinginEnglish.Whilethisliteraturecontinuestoreflect Indianculture,tradition,socialvaluesandevenIndianhistorythroughthedepictionoflifeinIndiaandIndianslivingelsewhere,recentIndian EnglishfictionhasbeentryingtogiveexpressiontotheIndian experienceofthemodernpredicaments.Theaimofthis courseis tointroducelearnerstoIndianWritinginEnglishfromthecolonialtothepostcolonialperiod.Issues such as identity politics,gendered differences, home,dislocation,languageamongothersshallbeunderscoredwiththeintentiontounderstandthediversityofIndianculture andtradition acrossspatiality.
English-C-4	Poetics**BRITISH POETRY ANDDRAMA:14THTO17THCENTURIES**	Theobjectiveofthiscourseistoacquaintthelearnerswith British poetry anddramafromChaucertoShakespeare.Thetextsprescribedrelatetothe Age ofChaucer,Pre-ElizabethanandElizabethanperiods.Shakespearefigurespredominantlyinthiscourse,withatragedy,comedyandtwosonnetsprescribed. Marlowe'splayencapsulatesthespiritoftheRenaissance,thereby placingtheElizabethanperiodinaproperperspective.
English-C-5	**AMERICANLITERATURE**	Theobjectiveofthiscourseistointroducethelearnerstoamericanliterature,afieldthatcouldbeconsideredascomparativelyrecentinformulation,whencomparedtotheliteratureof BritainandContinentalEurope.Itis aliteraturesteepedinthereactionaryphilosophyofitsPuritanforbears, andhasastrongindividualisticspiritrunningthroughit.Therealityorillusionofthe GreatAmericanDream,thetranscendentalistmovement,the historyofslaveryintheSouth,thegreateconomicdepressionetc.,formsimportantcontextstoAmericanhistoryandliterature,andthiscoursewouldattempttohighlightheseissues as muchaspossible.Allof thesewouldbetakenupinthis course

English-C-6	**POPULARLITERATURE**	Popularliteratureincludesthosewritingsintendedforthemassesandthosethatfindfavourwithlargeaudiences.Itcanbedistinguishedfromarticliteratureinthatitisdesignedprimarilytoentertain(brittania.com). Theobjectiveofthiscourseistoacquaintlearnerswithpopularliterature,suchascrimethriller,graphicfiction,children'sliteratureandsoforth,generallyregardedby purists tobe'low-brow'andmeantforeasymassconsumption.However,itwouldbewrongtoassumesuchapositioninsofarasthelinesofdistinctionbetweenwhatisliterary andwhat ispopulartendstobeblurred
English-C-7	**BRITISHPOETRYANDDRAMA:17THAND 18THCENTU**	EnglishliteratureoftheSeventeenthandtheEighteenthcenturywas dominatedbyepoch-makingpoliticalevents,suchasthePuritanInterregnumandthe Restoration.Theseevents wereresponsibleforusheringinchangesinthethought-processesof poetslikeMiltonandPope,dramatistslikeWebsterandBehn,and soforth.FromtheromanticexcessesoftheElizabethanliterature toaliteraturemarkedbyrestraintandorder,thelearnerswould beinapositiontoexperienceawholegamut offeelingsthat defineaperiodandcontradistinguishingitfromanother
English-C-8	**BRITISHLITERATURE:18TH CENTURY**	Continuing withEighteenth-centuryliterature,this courseoffersanarrayoftextsacrossgenres.Theeighteenth-centurywasanageinwhichnewmodesof creativeexpressionwerecomingtothefore,particularprosenarrativesofthelikes ofSwiftandSterne,amongothers.Ironyandsatirebecameimportanttoolstodepictsociety'sills.Theagewasalsocharacterisedbyimportancegiventogenderissues.Congreve'splaybearsenoughtestimonytothisfact.Since,thisperiodisalsoreferredtoastheAgeofEnlightenment;'reason'becamethelocusfromwhichhuman'sactionsandcognitionissuedforth.Therefore,afundamentalphilosophicalshiftusheredin,inthewakeofthe cultureof positivismthatsetinduringthis period
English-C-9	**BRITISHROMANTICLITERATURE**	TheliteratureoftheRomanticperiodisconsideredtobethemostaffectiveintermsofthewaysinwhichit wasabletoconnectwithpeopleacross classlines.Productoftherevolutionaryzealprecipitatedbytwogreatrevolutions– theFrenchRevolutionandtheAmericanWarofIndependence–the highlyimaginative,rhetorical,emotive,visionary,metaphysical,epical,sensuousaspectsoftheworks,especiallypoetry,gavetremendousheftto this literature celebratingNatureinallitsbeauty,majestyandterror.TheGothicNovelbecameadominantgenre,whichattemptedtodebunkthestructureofrationalitybyemphasising ontherealityofthesupernatural

English-C-10	**BRITISHLITERATURE:19THCENTURY**	Thenineteenth-centuryisemblematicofacertainspiritualcrisisthathadsetinduetothepowerfulimpactofscientificideology.Utilitarianvaluesexhortingpersonalaggrandisementatthecostofsocialresponsibilitybecamethepracticeofdailylivesofthepeople. Such an attitude finds ample illustrationinthe works ofthenineteenth-centurynovelistsandpoets.Thisperiod,especiallyafter1837is termedas 'Victorian'literature–atermthatevokesnotionsofpropriety,prudishness,censorship,among others,thatwasinsharprelief againstthespiritoftheerstwhileRomanticperiod.The periodisalsomarkedbyground-breakingtheoriespropoundedbyDarwin,Marx andFreud,whichimpactedthethoughtprocessesofthepeopletosucharemarkableextentthatitseffectsarefeltuptothepresent.Therefore,areadingofnineteenth-centuryEnglishliteratureprovidesafascinatingopportunitytoimmerseoneselfintothefraughthistoricalcontextdeterminedbycontradictory, oppositionaldrivesandprocesses.
English-C-11	**WOMEN'SWRITING**	Unarguablythetruestfactabouthumansocietyisdominationofwomenbymen.Patriarchybelievesinthesuperiorityofmanoverwomeninallwalksoflife.Therefore,womenweredeniedagencytoairtheirviewspublicllyorinwritings.Thefactthatwomenhadtoresorttomalepseudonymsinordertofindreadershipismerelyoneinstancetoprovehowpatriarchalideologyhasastrangleholdover thesocietyatlarge.Sincewomenhavebeensystematicallysilenced by 'phallogocentric'ideology, they finditrather difficulttoarticulatetheirviews.Privilegingwomen'swritingisawaybymeansofwhichthethought, anxieties,fears,desires,emotionsofthe'secondsex'canbeaddressed.Theobjectiveofthiscourseistointroducelearnerstowomen'swriting,andindoingsoattemptingtounderlinethemannerinwhichpoweroperatestosilence womenfromarticulatingtheirviews.Apartfromthat,thecoursewouldalsotrytosituatewomen's writinginaspacethattranscendsorupendsthemalewritingtraditionthroughvarious(subversive)ways
English-C-12	**BRITISHLITERATURE:THEEARLY20THCENTURY**	TheearlyTwentieth-centuryBritishliteraturewascharacterisedbyexperimentationsonthelevelof bothformandcontent.TheimperialisticWorldWarIimpactedthemindsofthepeopleacrossEurope tosuchanextentthattheybegantosufferfromvarious neuroticsymptoms.Capitalismwithitsdehumanizedprocesses andpracticesproducedalienated,disenfranchisedsubjects, triggeringaphilosophicalshiftthatwasencapsulatedin symbolism,existentialism,cubism,Dadaism,expressionism,and nihilism.ThesephilosophiesfoundamplespaceinModernismin Literature,andthisparticularcourseattemptstochartthese philosophicaltrajectoriesthroughearlytwentieth-centurytexts, particularlynovelsandpoetry

English–C-13	**MODERNEUROPEANDRAMA**	Thetwentiethcenturymarkedtherevivalof dramaafter itwasforcedtoshutdownduringthePuritanInterregnum.Eventhought herevivalstartedduringtheRestorationPeriod,itsubsequentlylostgrou ndduringtheRomanticandtheVictorianPeriod.Itwaswiththe onsetofthetwentieth-centurythatdramamade amagnificentreturn.ItwasinEurope,particularlytheplaysoftheNorweg ianplaywrightHenrikIbsen,theGermanplaywrightBertoltBrechtandFr enchplaywrightSamuelBeckettthatdramabecameanimportantvehicl eforrepresentingthepolitical,social,individual,economicconditionsth epost-warEurope,withallitsattendantillsandtrauma.Thiscourseintendstore adtheplays by placingtheepochaleventsoftheperiodasthebackdrop.
English-C-14	**POSTCOLONIAL LITERATURES**	Thiscourseintroducespostcolonialliteraturetothelearners.Theimpor tanceofpostcolonialstudiesinaglobalisedworldinwhichmorethanthr ee-quartersofthepeoplelivingintheworldtodayhave hadtheir livesshapedbythe experience ofcolonialism,cannotbe overestimated.The mainfocusinthe courseis onliterarytexts andliteraryanalysis.TheliteraryworkschosenareEnglishlanguagetext sfromtheerstwhilecolonizedcountries
AECC-1	**ENGLISHCOMMUNICATION**	Thepurposeofthiscourseistointroducestudentstothetheory,funda mentalsandtoolsofcommunicationandtodevelopinthemvitalcom municationskillswhichshouldbeintegraltopersonal,socialandprofe ssionalinteractions.Oneof thecriticallinksamonghumanbeingsandanimportantthreadthatbin dssocietytogetheristheabilitytosharethoughts,emotionsandideas throughvarious means ofcommunication:bothverbalandnon-verbal.Inthecontextofrapidglobalizationandincreasingrecognition of socialandculturalpluralities,the significance of clearandeffectivecommunicationhas substantiallyenhanced.The presentcoursehopestoaddresssomeof these aspectsthroughaninteractivemodeofteaching-learningprocessandbyfocusingonvariousdimensionsofcommunica tionskills.Someoftheseare:Languageofcommunication,variousspe akingskillssuchaspersonalcommunication,socialinteractionsandco mmunicationinprofessionalsituationssuchasinterviews,groupdiscu ssionsandofficeenvironments,importantreadingskillsaswellaswriti ngskillssuchasreportwriting,note-takingetc.While,toanextent,theartofcommunicationisnaturaltoalll ivingbeings,intoday'sworldofcomplexities,ithasalso acquiredsomeelementsofscience.
AECC-2	**ALTERNATIVEENGLISH(SEMESTER1)**	ThiscourseisofferedinlieuofMIL,forlearnerswhodonothavethereq uiredcompetencetotake upanyof themodernIndianlanguagesthatarepartoftheundergraduatecurric ulum.Theobjectiveofthiscourseistoacquaintlearnerswithsomeoft hemostrepresentativeProsePiecesandShortStoriesinthewesternli teraryandculturalcanon.However,thecoursealsoaccommodateste xtsthataresignificantinIndianwritinginEnglish.Therationaleforincl udingthiscourseas partof AECCcoursesis toimpartlearnerswiththeideaof thebestthathas beenwritten(ortranslated)intheEastaswellastheWest

DSE-2	**LITERATURE OF THEINDIANDIASPORA**	Generally,*diasporicliterature*dealswithalienation,displacement,existentialrootlessness,nostalgia,questforidentity,hybridityandsoforth.Indian diasporawritershavecontributedimmenselytoliterature,especiallythose writinginEnglish.SalmanRushdie,AmitavGhosh, Vikram Seth, Jhumpa Lahiri, RohintronMistry,V.S. Naipauletc.areluminariesinthefieldoffictionandtheirworkshaveearned bothcritical acclaimandcommercial success.The objectiveofthiscourseistointroducelearnerstoliteratureoftheIndiandiaspora keepinginviewtheissuesthathauntthewriterswhohavesettledabroad,despitebeingIndiansintermsofrootsandemotionalmake-up.
DSE-3	**LITERARYCRITICISM**	Thecourse presentsanoverviewofmajortrendsinliterarycriticismfromtheRomanticperiodtothepresent.ThecriticaltrajectorycomprisesofRomantictheoryofpoetrypropoundedbyWordsworthandColeridge,modernistpoeticsofWoolfandEliot,NewCriticismofRichards andCleanthBrooks,andanintroductiontorecenttrendsin criticism,particularlyfeministcriticism(byMaggieHumm
DSE-5	**LITERARYTHEORY**	Literarytheoryisafieldwhichispresentlyingreatacademicdemand.Itinvolvesreadingtextsbydeployingdiscourse/s.Thesediscourseshavepolitical,social,economic,gendered,culturalvalues,andwhenonereads literaturethroughsuchdiscursivelenses,interpretationoftextstendtobemultipleandheterogeneous.Theobjectiveofthiscourseistoacquaintlearnerswithfourrelevantdiscourses or theories.These areMarxism, Feminism,Poststructuralism,andPostcolonialStudies
DSE-7	**PARTITIONLITERATURE**	ThePartitionwasperhapsthemosthorrificeventofthetwentieth-centurysubcontinent'shistory.Thousandsofinnocentpeople acrossthedividednation(IndiaandPakistan)losttheirlives,millionslosttheirhomes,andmigrationsofunimaginablemagnitudetookplace.Itisimportanttounderstandthebackgroundsandreasonforthepartition,butalsotoconsideritseffectsonthelivesofthepeopleinvolved.Thehistoricalaccountsmaynotbeenough;imaginativeliteraturehelpsfillinthegapsinunderstandingtheemotionalimpactoftheseeventsonpeople'slives.So,theobjectiveofthiscourseistoreadliteraturethatcapturesthesenseofthetimes.Therewill alsobefilmscreeningssincecinemaalsohelpscapturebothhorrorandthe repercussionsoftheseevents.

FYUGP(NEP)			
SEMESTER	**COURSE CODE & NAME**	**COURSE OBJECTIVES**	**COURSE OUTCOMES**
I	C1: British Poetry and Drama: 14th to 17th Century	The Course Objectives are: 1. To acquaint learners with British poetry and drama from Chaucer to Shakespeare 2. To familiarize learners with the historical context of the period – Chaucer, PreElizabethan, and Elizabethan	Students will be able to CO1: Evaluate the Age of Chaucer LO1: Understand the cultural and social norms of the Age of Chaucer, including them feudal system and the role of the Church LO2: Evaluate the importance of Chaucer's works in the context of the

		3. To discuss William Shakespeare's prescribed plays and sonnets in a detailed manner Marlowe's play encapsulates the spirit of the Renaissance 4. Understand the spirit of the Renaissance era encapsulated through Christopher Marlowe's play	literary scene of his time. LO3: Assess the characteristics of medieval poetry with special reference to Chaucer's The Nun Priest's Tale. CO2: Examine the genre of Elizabethan drama and the ethos of Renaissance Humanism with respect to the works of Shakespeare and Christopher Marlowe LO1: Analyze the key characteristics of Elizabethan drama, including its themes, theatrical conventions, and historical context, to understand its significance in the development of English literature. LO2: Discuss how the core principles of Renaissance Humanism such as 'individualism' and classical revival are reflected in the prescribed works of Shakespeare and Marlowe. LO3: Discuss the significance of the stage, court, city in Elizabethan dramas by examining their roles in shaping plot, character interactions, and thematic development. LO4: Assess the complexities of religious and political thought in Elizabethan England by analysing primary texts. CO3: Trace the development of Romantic comedy during the Elizabethan age LO1: Analyse the defining elements of Romantic comedy in Elizabethan literature, such as love and marriage, humor, mistaken identities, complex plots etc. LO2: Compare and contrast the role of gender and class in the romantic comedies of the Elizabethan period. CO4: Describe Metaphysical Poetry and its thematic complexity LO1: Analyse and interpret the thematic complexity of Metaphysical poetry, identifying its key characteristics such as paradox, irony, and the use of metaphysical conceits. LO2: Apply knowledge of identifying the metaphysical elements in the poetry of John Donne LO3: Critique John Donne's contribution to Metaphysical poetry, comparing his work with that of his contemporaries to evaluate his influence on the genre.

DEPARTMENT OF GEOGRAPHY
CBCS

BA PROGRAMME WITH HONOURS IN OTHER SUBJECT AND GEOGRAPHY A SGENERIC ELECTIVE

COURSE CODE	COURS ETITLE	COURSE OUTCOME
GE101AT6	DISASTERMANAGEMENT	1. Tomakethestudentsawareaboutthecon ceptsofhazards,disasters,riskandvulnerabi lity 2. Attempthasbeenmadetopreparethe studentsabouttheDo'sAndDon'tsduringandpost disaster.
GE201BT6	REGIONALDEVELOPMENT	1. Tointroducethestudent aboutthebasicofregionsandtheneedofregional planninginIndia. 2. Thestudentswillalsolearnaboutthe strategiesandmodelsusedforregionalplanning.
GE301AT6	CLIMATECHANGE:VU LNERABILITYANDAD APTATION	1. to make the students understand climatechange and the factors responsible for suchchanges 2. Thestudentswillalsolearnaboutthevarious negative impact of climate change on flora andfaunaanditsmitigations.
GE401AT6	INDUSTRIALGEOGRAPHY	1. Thispaperistomakethestudentsawareabo utthenatureandscopeofindustrialgeography 2. Thestudentswillalsoknowaboutthevariousindu strialpoliciesofIndiaandimpactofindustriesinthee nvironment,societyand economyofIndia

DEPARTMENT OF HINDI

BA PROGRAMMEWITH HONOURS IN HINDI (CBCS)

COURSEOUTCOME

COURSE CODE	COURSE TITLE	COURSEOUTCOME
Hindi-C-1	हिन्‍दी साहित्‍य का इतिहास: (रीति कालतक)	fहन्‍दी साfहत्‍यकामकfवकासदवारहमहमारामयकालन सांस्‍कृतकfवरासतकfदशा,दशाऔरसाfहत्‍यकगfतfवfधयोंका पताचलताह;िजसतनिकालख, ढूमबांकरउसअध्‍ययनकcयवथाकगईह।fहन्‍दीकसाfहत्‍यकगfतfवfधयोंकfवका स-य8। मfवfभन्‍नपड़ावोंकोजानfबनाउसकामूल्‍यांकनसंभवनहांहइस यानमरखतहएपाCयमबनायागयाह;ताfकछात्रोंकोिहन्‍दीक सहीfदशा,दशाकापताचलसकऔरवउसकालाभउठातहएअपन लक्ष्‍यकओरबढ़सक
Hindi-C-2	हिन्‍दी साहित्‍य का इतिहास: (आधुनिककाल	आधुfनककालमपा9चायLभावक्‍कलवNपकईसामािजकऔरढाांचगतपfरवतनदखनकोfमलिजसनसाfह यकfदशाबदलदा। इसकालमfहन्‍दीसाfहयमकईनईfवधाओंकाजन्‍महआ।fवशष Nपसगदयकfवfभन्‍नfवधाओंकाfवकासइसकालकमहवपूण दनह।िजसनएकनयमूल्‍यबोधकोजन्‍मfदया,िजसकउपादयता आजभीहापfरवतनकाfनयवएकनईfदशाकओरइशाराकरता ह।छात्रउससLभfवतहएबगरहजातइसबातकायानम रखतहएइसपाCयममरखागयाह।
Hindi-C-3	आदिकालएवमध्‍यकाल न हिन्‍दी कfवता	fहन्‍दीसाfहयकएकअfवfच्‍छन्‍नधाराआfदकालसLवfहतहोतरहीिजसपरतदयुगीनपfरिथfतयोंकाLभावदखाजास कताह।आfदकालनऔरमध्‍यकालनकfवयोंनअपनीकfवताओंकमायम सउसदशनकोLयासfकयाह।अतःउनकरचनाओंकोजानबगर उसयुग कामूल्‍यांकनसंभवनहांह।अतःइसकालककfवताओं कासdयकअध्‍ययनइसपाठ्यक्रममखउ5श्‍यरहाह।
Hindi-C-4	आधुनिकहिन्‍दीकfवता(छायावादतक)	fहन्‍दीसाfहयकाआधुfनककालकाLरdभ1850ईoसमानाजाताहािजसकामूल कारणपा9चायLभावरहाहापा9चायसाधनोंसNबNहोनककारणहमारासोचमपfरवतन होनलगा।इसकालम भारतमराट्रीयबीजअकुंरतहएछापखानकाआfवष्‍कारहआ िजसकाLभावLय_औरपरो_Nपसfहन्‍दीकcयपरभीपड़ा। इसकझलकइसकालककfवताओंमभीfदखाईपड़ताह।अतएव इसकालकfवषयमसdयकअनुसंधानकरनतथाजानकारीहाfसल करनाहीइसपाठ्यक्रमकामुख्‍यउ5श्‍यह।

Hindi-C-5	छायावाद ोतरकfवता	बीसवीशताbदक्ाभारतकेलएउथल- पथुवालाकालरहाहैहर__ेमयहाबदलावदखनकोfमलताहासाfहयकेल7ि]टसदखताो िजतनापPरवतनfपछलसाैवषामनहाकहाआथा;उतना बदलाव अगल50वषामदखनकोfमलाइसकालमभारतकोआजाद करानकेछटपटाहटऔरआजादकेबादराजनfतसबहुतजादहोमहभागहोनलगाजिसकाLfतएकfव5होkवर वाधीनोतर कfवताओमदखनकोfमलताहैभारतीयमानfसकता,साfहयऔर कfवतामहोन वालपPरवतनेकओरयानfदलानाइसप8काः म4यउ5ेयहै।
Hindi-C-6	भारतीयकाुयशा #$	भारतीयकाcयशा8यfचतनका__ेबहुतcयापकरहाहैइस__ेकपरपरासदाघऔरशfRतशालोरहाहैइस7ि]टसछ ा8क भारतीयकाcयशा8यfचतनकेबारमजाननाजNरोहोजातोहै। काcयशा8कपरपरा,काcयल__ण,काcयहेत, काcयLयाजन, fवfभ:नसाfहयशा 8ायfसदात कोइसपाCयममरखागयाह,जो काcयशा8कमहवपणूउपलbधहैइसकेअययनसछा8ःम समी__ामकशfRतबढ़गी।
Hindi-C-7	पा9चायकाुयशा #$नईसमा) ा एव	पा9चममसाfहयfचतकसदाघपरपराकाfवदयाfथयाकेलएसहज,k5यNपससलभकरानकfदशामLततपाCयमए कमहवपणूLयासहैfव9लषणपदfत,नईसमी__ा,fवfभ:नवाद,इ्यापाCयमकाLमखआकषणहैभारतीयकाcयशा8क साथ-साथ पा9चायकाcयशा8केबारमभीजाननाआव9यकहैइसम fवदयाथीfवfभ:नfवदवानेक दवाराfदयगएसदांतेक साथ पा9चायकाcयशा8केNपकेबारभीसमझनमस__महेग।
Hindi-C-8	भाषाfवeानऔरहदभाषा	भाषाfव□ानअययनकावहशाखाहैजिसमभाषाकाउपfत, वNप,fवकासआfदकाव्ािनकएवंfव9लषणामकअययनfकयाजाताहैअययनकेअनेकfवषयेंमसआजकल भाषाfव□ानको fवशेषमहवfदयाजारहाहैfवदयाथीइसपाCयमकेअययनक प9चातभाषाएवंभाषाकाLकातकेसाथ-साथमानवजावनमभाषा केमहवकोसमझनमस__महेगेइसकेअलावाभाषाfव□ानक अंगेएवंfवfभ:नशाखाओसपरfचतहेगेभाषाfव□ानकेसदांतक प__,भारतीयआयभाषाओकाऐfतहाfसकfवकास,fलfप केऊqव औरfवकास,दवनागराfलfपकेजानकारीभीLrतकरसकेगेइस बातकायानमरखकरइसपाCयमजगहfदयागयाहै।

Hindi-C-9	हद उप6यास	इसप8 मगदयस ाfहयकमहवपणू fवधउप6यासक ाfलयागयाह। उप6यासकअतगतबन', यागप$', मानसक ाहस, महाभाज क ाशाfमलfकयागयाहैजबLम ाद कउप6यासक बतह ातेाहतागेादा नकबन उप6यासस ाfहयपरसाथकचचनाह ाहेसक ताहैजनेा5कमारकमहवपणूक fतयागप$'मcया Rतमनकव्धबेदआोचनरfकयागयाह।Rलfसकेक ासdमानपा चकमानसकाहस ागवामातस ादासकजावनपरआधाPरतअमतालनागरककहउप6यासहैजसकद्वरागवामाजाकज ावनससबधतअनछ्पहलओक ाजानाजासकताहाम6नूभ, डा Rकमहाभ ाजउप6यासमसाधारणजनकजनताम कहाजगहह, यहजानपायग6हkसबबातक ाय ानमरखकरइनचारउप6यास कपाCयममजगहदाkगईहै।
Hindi-C-10	हदकहानी	इसप8 कअतगत कहान ाक वकासस छा8क ापPरचयकराया जाएगा।यगक प्रवतनक बच कहान ाककथावतऔर Nपवधान मपPरवतनहोतारहाह; औरउससकहान ाक fदशाबदलती रहती ह।इसपाCयममकहान ाकवकासय ा8 कजानकारीइन कहाfनय क मायमसआप जानसकगहदकLसद कहान ाकारककहाfनयसजीवनकत्मामहवपणू fबदओ क समझहोगा।सनसाठकबादककहाfनयक बदलहएतव्स fवदयाथयक ापPरचयहोगा। L मचसलकरक] णसाबतातक ककहाfनयक ाएककलामकया8ातयकरनकबादवfवकरणक ादृमशा__कलायक्साथसाथस ाfहयसाधनामछा8 अपन भfूमक ातलाशकरसकग।इह kसबक ाय ानमरखकरइन कहाfनय क ापाCयममजगहदा kगईह।
Hindi-C-11	हदनाटकएवएकांक5	यहपाCयमनाwयस ाfहयससबधतहै।इसप8 क उ5 यस ाfहयकसवाधकसशRतएवLभावशालाfवधाक NपLचfलत नाटककउपादयताकओरयानआकfषत करानाह।भारतादतथा उनकसमकालाkननाटककारनfकसतरहलाकचतनाकवकासक fलएनाटकक रचनाकतथासमकालाkनसामाजकसमयाओका नाटकमअfभcयRतकरनकाअवसरLारfकया।उसकबाद साfहयकरगकमनाwयलखनकपरपराचलाk, छा8उनतमामबात कजानकारीLारतकरसकगासमकालाkनसमयमपणू xगनाटकऔर एकांकनाटककLसागकतापरfवचारकरसकगासमkतनाटकक LftNfचउप6नहानसअfभनयदवाराअपनीआजाfवकाकासध्म करपायगा।

Hindi-C12	हिन्दी निबंध एवं अन्य गद्य विधाएं	हिन्दी साहित्य में निबंध का महत्वपूर्ण भूमिका रही है। इन निबंधों में हिंदी के श्रेष्ठ निबंधकारों के निबंधों को पाठ्यक्रम में रखा गया है, जिससे विद्यार्थियों को निबंध की विकास-यात्रा का बोध होगा। यह निबंध साहित्य के विभिन्न आयामों से परिचित कराएगा। इसके साथ ही रेखाचित्र, संस्मरण, व्यंग्य, यात्रावृत्त, जीवनी, आत्मकथा आदि विधाओं के विकास से परिचित होने का अवसर प्राप्त होगा।
Hindi-C-13	हिंदी का साहित्यिक पत्रकारिता	हिंदी की साहित्यिक पत्रकारिता का हिंदी साहित्य में महत्वपूर्ण योगदान रहा है। इस बात को ध्यान में रखते हुए इसे अनिवार्य पाठ्यक्रम में रखा गया है। पत्र-पत्रिकाओं ने हिंदी साहित्य को एक नई दिशा प्रदान की तथा समय-समय पर हिंदी साहित्य की आलोचना कर इसका मार्गदर्शन किया है। इस पाठ्यक्रम के अध्ययन से हिंदी पत्रकारिता के स्वरूप से परिचय प्राप्त होने के साथ-साथ हिंदी साहित्य जगत में पत्र-पत्रिकाओं के योगदान की भी जानकारी प्राप्त होगी। यह हिंदी पत्रकारिता के संपूर्ण इतिहास का अध्ययन किया जाएगा। पत्रकारिता के इतिहास के साथ-साथ हर युग की प्रमुख प्रवृत्तियों पर भी विचार किया गया है। हर युग की महत्वपूर्ण पत्र-पत्रिकाओं का संक्षिप्त परिचय दिया गया है।
Hindi-C-14	प्रयोजनमूलक हिंदी	प्रयोजनमूलक हिंदी मूलतः एक व्यावहारिक पाठ्यक्रम है। अनुप्रयुक्त भाषा विज्ञान के अंतर्गत इस पाठ्यक्रम में हिंदी के विविध प्रयोजनमूलक रूपों की चर्चा है। इस पाठ्यक्रम के अध्ययन से विद्यार्थियों को हिंदी के शैलीय भेद, हिंदी उर्दू और हिंदुस्तानी का ज्ञान प्राप्त होगा तथा हिंदी के संवैधानिक स्थिति की भी जानकारी होगी, जो निःसंदेह लाभदायक होगा। हिंदी भाषा के विकास के साथ-साथ हिंदी भाषा के मानकीकरण एवं उसके प्रयोग क्षेत्र पर भी विचार किया गया है। यहां विविध प्रकार के सरकारी पत्राचारों का अध्ययन होगा और साथ ही हिंदी की पारिभाषिक शब्दावलियों का अनुशीलन कराया जाएगा। प्रयोजनमूलक हिंदी का सटीक अध्ययन रोजगार प्राप्ति में सहायक सिद्ध होगा।
Hindi-DSE-1	असमिया भाषा एवं साहित्य	यह पत्र असमिया भाषा और साहित्य से संबंधित है। हिंदी के विद्यार्थियों के लिए अध्ययन का दृष्टि से यह पत्र नया होगा। साहित्य चाहे जहां का भी हो लेकिन साहित्यिक प्रवृत्तियां थोड़ी-बहुत अंतर के बावजूद लगभग एक जैसी होती हैं। असमिया एक आधुनिक भारतीय आर्यभाषा है। इसके उद्भव और विकास की जानकारी का ज्ञान होने के साथ ही इसके साहित्यिक गतिविधियों की जानकारी

		भी आव9यक है जिसके ध्यान में रखते हुए इस प8म असमीया साहित्य के इतिहास के सामान्य परिचय (आदि युग, सलकर से मध्यकाल युग) तक के पा Cयम में थान दिया गया है ? मध्यकालीन कवियों के बिना असमीया साहित्य का पन अधूरा है, इस बात को ध्यान में रखकर उनको और उनके समर्थ श] यमाधव दव कव रचित को भी रखा गया है। रामायण रचित कया ग क्या दक्ुमार अगरवाला और नलिनबाला देवी को कवियों ताओं के साथ सम्य दक्षDदलु मालक और भव दन थ शर्मा को भी थान दिया गया है, ताकि विदयार्थी असमीया भाषा एवं साहित्य की गतिविधियों को भी जान सकें।
Hindi-DSE-2	छायावाद	छायावाद आधुनिक हिन्दी साहित्य का एक महत्वपूर्ण पड़ाव है। Lस्तु Cयम में छायावाद के Nप और विशेषताओं के साथ-साथ चत] wयक वियों के चुनिंदा कविताओं को थान दिया गया है। यह पा Cयम छात्रों में पा Cयक तत्वों के संभ्रम समीक्षा के मता को बढ़ाएगा। इस पा Cयम के अध्ययन का 9च तछ छायावाद के Nप और Lवृत्तियों के अलावा युगीन Lमख कवियों की रचनाओं का अध्ययन, आस्वादन और मूल्यांकन कर सकें। इस बात को ध्यान में रखकर इस पा Cयम में रखा गया है।
Hindi-DSE-3	तुलसीदास	संत कवि तुलसीदास के रचनाओं पर आधारित यह पा Cयम विदयार्थियों के लिए अत्यंत लाभदायक सिद्ध होगा। उनके द्वारा लिखित भी Rत के सन्देश से पूर्ण भी Rत साहित्य का अनमोल निधि है। उन्होंने रामचरितमानस की रचना करते काल में अशांत भारत में आदर्श और मर्यादा को पुनः स्थापित किया था। इसीलिए आज भी तुलसीदास की रचनाएं Lासंगिक हैं। इस पा Cयम का उ5देश्य तुलसीदास के असाधारण cयक्तित्व पर Lकाश डालना, रामचरितमानस के अध्ययन से विदयार्थियों को आदर्श और मर्यादा के स्थापन का ज्ञान भी Lाप्त होगा। कवितावली और गीतावली के माध्यम से तुलसीदास के काव्य Lतिभा तथा भी Rत का ज्ञान Lाप्त होगा। विनयपत्रिका हिन्दी साहित्य का अनमोल निधि है। तुलसीदास ने विनयपत्रिका में दास्य भी Rत का अत्यंत सुंदर Lदर्शन किया है।
Hindi DSE-4	; मचंद	हिन्दी साहित्य के इतिहास में गद्य लेखन का उदय एक महत्वपूर्ण घटना के Nप में सामने आती है। साहित्यिक Nप में गद्य लेखन के

		शN आतसवध्मभारतद्वयसाहेताहै, लिकनयहभीगदयकविवकसितNपनखरकरनहकआपताह।20वशतbदकेशN आतमगदयलेखनकसबधथितNपहमासमनउभरकरसमनआताहकथस□टL मचकेआगमनइसकेलमएकयगातकरकेNपमहेताह, जोसूयकतरहअपनसेहयसनकवलहीनहअगतकबीकपरूभारतकेLकशतकरनलगतहैवक्कहनकरऔरउपयासकरहेनहएकनटककरऔरनबधकरभथऐससहयकरक्बारमजाननजNरहेजाताहइसबातकेयानमरखकरइसपCयममथनदयागयाहै
AECC-2	हक्कियएवगदयससाहय	आधनिकभारतीयभाषाएकअनवायप8हैइसप8क्मायमससिवदयथियोंकेसाहयकहर विधासेपरिचितकरानकेलियेसकयागयाहैइसप8क म4यउ5यछ8$कभीRतकलेकन उचादशकओरयानदलानाहैइसकेसाथहीछायावाद, रहयवादकेबतओकेसाथहीदयकेअलावLगितवादकेसमथकेकविक्रनाथअkवालऔरLयागवादकेजनककविअ□यक cयीRतवादcयीRतवकेसमझनकेLयसहबसवशतमजम लकरऔरकछहीसमयममविकसितहोकरसाहयक्एकमहवपणू विधाकेNपमथनबनानवालेकहानीऔरगदयक केसटिनबधकेभीथानदयागयाहैभारतीयसंकृत, संकृतिकएकताऔरcयग निबधक्रम4यविषयहै

FYUGP(NEP)			
SEMESTER	**COURSE CODE & NAME**	**COURSE OBJECTIVES**	**COURSE OUTCOMES**
I	HINC1:हिंदीसाहित्यकाइतिहास: आदिकालऔरभक्तिकाल	हिंदीसाहित्यकेविद्यार्थियोंकोहिंदीसाहित्यसेपरिचय होनाजरूरीहै| हिंदीसाहित्यकेलेखनकीपरंपरा, कालविभाजन, नामकारनऔरआदिकालीनसाहित्यसेपरिचयजबतकनहींहोगा, तबतकविद्यार्थियोंकाज्ञानअधूरामानाजायेगा| उसीतरहहिंदीसाहित्यकास्वर्णयुगकहाजानेवालाभक्तिकालकेप्रमुखकवियोंकबीर, जायसी, सुरऔरतुलसीकेसाहित्यकेबारेमेंभीजाननाजरूरीहै| इसेध्यानमेंरखतेहुएइसपत्रकोपाठ्यक्रममेंरखागयाहै ताकिविद्यार्थियोंकोहिंदीकीसहीदिशा, दशाकापताचलसके|	CO1: हिंदीसाहित्यकेइतिहास काइतिहाससेपरिचितकराना| CO2: हिंदीसाहित्यकेप्रारम्भिक औरविकसमताकस्वरुप सेपरिचितकराना| CO3: भक्तिकालीनसाहित्यएवं भक्तिकेउदयकेभूलपुट कारणोंसेपरिचितकराना| CO4: भक्तकालीनकाव्यधरासे परिचयकराना|

DEPARTMENT OF HISTORY
CBCS

BAPROGRAMME WITH HONOURS IN OTHER SUBJECT AND HISTORY AS GENERIC ELECTIVE

COURSE CODE	COURSETITLE	OBJECTIVE
HISGE1	HISTORYOFASSAM:1228–1826	1. stogiveageneraloutlineofthehistoryofAssamfromthe13thcenturytotheoccupationofAssambytheEnglishEastIndiaCompanyinthefirstquarterofthe19thcentury. 2. It aimstoacquaint thestudentswithmajorstagesofdevelopments inthepolitical,socialandculturalhistoryofthestateduringthemostimportant formativeperiod
HISGE2	HISTORYOFINDIAFROMTHEEARLIESTTIMESTO1526	1. stoacquaintthestudentswiththegeneraloutlineofthehistoryofIndiafromtheknownearliesttimestothecomingoftheMughalstoIndiainthefirstquarterofthe16thcentury 2. Itis aimedatgivingthemacomprehensiveideaof thedevelopments inall spheresoflifeduringthisperiod
HISGE3	HISTORYOFINDIA:1526-1947	
HISGE4.1	HISTORYOFMODERNASSAM:1826-1947	
HISGE4.2	HISTORYOFEUROPE:1453-1815	

DEPARTMENT OF PHILOSOPHY

BAPROGRAMME WITH HONOURS IN PHILOSOPHY(CBCS)

COURSEOUTCOME

COURSE CODE	COURSETITLE	OBJECTIVE/Outcome
C1	IndianPhilosophy	Thispaperintendstoacquaintthestudentswiththebasicproblemsofepistemologyandmetaphysicsinclassical Indianphilosophy
C2	Logic	Thispaper aimstoacquaintingthestudentswithlogical reasoningandtestingoftheminAristotelianandModernSymbolic Logic
C3	AncientGreekPhilosophy	ThispaperintendstoacquaintthestudentswiththebasicproblemsofepistemologyandmetaphysicsinGreek Philosophy
C4	IndianLogic	Thispaperintendstoacquaintthestudentswiththe developmentofcriticalunderstandingofIndianlogic
C5	ModernWesternPhilosophy	Thispaperattemptstointroducestudentswiththe problemsofmodernwesternphilosophyandtodevelopsystematicandcriticalunderstanding
C6	Ethics ofIndianPhilosophy	ThispaperintendstoacquaintthestudentswiththebasicethicalconceptsofIndianphilosophyanddevelopcritical thinking
C7	WesternEthics	Thispaperattemptstointroducestudentswithdifferentethicalconceptsofwesternphilosophyanddevelopcritical understanding
C8	ContemporaryIndian philosophy-I	Thispaperintendstoacquaintthestudentswiththe philosophicalproblemsfromtheperspectiveofcontemporaryIndian philosophers
C9	Socialandpoliticalphilosophy	Thispaperintendstoacquaintthestudentswithdifferentsocialandpoliticalideasfromphilosophicalperspectiveandtodevelopsystematicandcriticalunderstandingabout them
C10	PhilosophyandReligion	Thispaperintendstoacquaintthestudentswithdifferent philosophicalissuesandtheoriesregardingreligion
C11	ContemporaryIndian philosophy-II	ThispaperintendstoexploredifferentinterpretationsgivenbycontemporaryIndianthinkersandtodevelop criticalunderstandingaboutthem
C12	Phenomenologyand Existentialism	Thispaperattemptstointroducesomeveryimportant movementsandpositionsofwesternphilosophywithspecific thinkers
C13	ComparativeReligion	Thispaper intendsto acquaintthestudentswithcharacteristicsandcomparativestudyofdifferentaspects ofworldreligions
C14	AnalyticalPhilosophy	Thispaperintendstoacquainttheanalyticaltrendsinwesternphilosophyabditsdifferentdimensionsleadingto criticalanalysis

BA PROGRAMME WITH HONOURS IN OTHER SUBJECT AND PHILOSOPHY AS GENERICELECTIVE

COURSE CODE	COURSETITLE	COURSEOUTCOME
GE1	Introductiontologic	Thispaperaimstomakethestudentfamiliarwiththebasic ideasofAristotelianandsymboliclogic
GE2		
GE3	FundamentalsofIndianPhilosophy	Thispaperintendstoacquaintthestudentswiththebasic problems of epistemology andmetaphysics inclassicalIndianPhilosophy
GE4	AppliedEthics	Thispaperintendstoacquaintthestudentswiththebasicideas ofappliedethicsconcerningvalueinlife, environmentalethicsandprofessionalethics

FYUGP(NEP)			
SEMESTER	**COURSE CODE & NAME**	**COURSE OBJECTIVES**	**COURSE OUTCOMES**
I	PHIC1: FUNDAMENTALS OF PHILOSOPHY	This is a core course of Philosophy designed for the learners of major in Philosophy. It aims to provide basic knowledge of the nature, scope, method, relevance of Philosophy as an academic discipline. It is further aimed at critical understanding of the philosophical concepts and theories on knowledge, truth, reality and value from Western perspectives.	The students will be able to CO 1: Determine the distinct nature, scope, method and relevance of Philosophy ILO 1.1: Define Philosophy ILO 1.2: Describe the scope of Philosophy ILO 1.3: Understand the nature of Philosophy as distinct and different from science ILO 1.4: Determine the distinct methods of philosophical enquiry ILO 1.5: Determine the relevance of Philosophy CO 2: Assess the problems of the sources of knowledge and responses to it from rationalist and empiricist philosophical perspectives ILO 2.1: Understand categories of knowledge ILO 2.2: Detect the problems of the sources of knowledge ILO 2.3: Analyze the rationalistic approach to the sources of knowledge ILO 2.4: Critically estimate the rationalistic approach to the sources of knowledge ILO 2.5: Analyze the empiricist approach to the sources of

			knowledge ILO 2.6: Critically estimate the rationalist approach to the sources of knowledge CO 3: Estimate critically the problems regarding the nature of the object of knowledgeand responses to it from realist, idealist and critical philosophical perspectives ILO 3.1: Understand the basic questions regarding the nature of the object of knowledge ILO 3.2: Analyze the realist (both Naïve and Scientific) explanation of the nature of theobject of knowledge ILO 3.3: Estimate critically the realist (both Naïve and Scientific) explanation of thenature of the object of knowledge ILO 3.4: Analyze the idealist (both Subjective and Objective) explanation of the natureof the object of knowledge ILO 3.5: Estimate critically the idealist (both Subjective and Objective) explanation ofthe nature of the object of knowledge ILO 3.6: Critically estimate the rationalistic approach to the sources of knowledge ILO 3.7: Compare and contrast rationalism, idealism and critical theories of knowledge CO 4: Assess the problems of reality regarding its nature of number and responses toit from philosophical perspectives ILO 4.1: Analyze the multifaceted monistic, dualistic and pluralistic philosophicalstandpoints regarding the problem of the number of ultimate reality ILO 4.2: Assess monistic views regarding the nature reality ILO 4.3: Assess dualistic views regarding the nature reality ILO 4.4: Assess pluralist views regarding the nature reality ILO 4.5: Compare and contrast monistic, dualistic and pluralistic responses to the problem of the number of

			ultimate reality CO 5: Evaluate the philosophical enquiry of truth ILO 5.1: Understand the problem of truth from philosophical perspective ILO 5.2: Analyze and evaluate Correspondence theory of truth ILO 5.3: Analyze and evaluate Coherence theory of truth ILO 5.4: Analyze and evaluate Self-evident theory of truth ILO 5.5: Analyze and evaluate Semantic theory of truth CO 6: Evaluate the philosophical enquiry of value ILO 6.1: Analyze the issues of intrinsic and extrinsic nature of value ILO 6.2: Analyze the issues of the subjectivity and objectivity of value ILO 6.3: Analyze the issues of the relative and absolute nature of value ILO 6.4: Evaluate the contradictory philosophical approaches regarding the intrinsic,subjective and relative nature in one hand and extrinsic, objective and absolute nature of value on the other

DEPARTMENT OF POLITICAL SCIENCE

BA PROGRAMME WITH HONOURS IN POLITICAL SCIENCE(CBCS)

COURSEOUTCOME

COURSE CODE	COURSETITLE	OBJECTIVE/Outcome
C1	Understanding PoliticalTheory	Thecourseintroducesthestudentstotheideaofpolitical theory, itshistoryandapproaches,andanassessmentofits criticalandcontemporarytrends.
C2	ConstitutionalGovernmentand DemocracyinIndia	Thiscourseacquaintsthestudentswiththeconstitutional designofStates'structureandinstitutions,andtheiractualwork ingovertime.
C3	PoliticalTheory:Conceptsand Debates	TheCoursehelpsthestudent familiarizewiththebasicnormativeconceptsofpoliticaltheo ry.Eachconceptisrelatedtoacrucialpoliticalissuethatrequir esanalysiswith theaidofourconceptualunderstanding.
C4	Political ProcessinIndia	Thiscoursemapstheworkingof'modern'institutions,premi sedontheexistenceofanindividuatedsociety,inacontextm arkedbycommunitariansolidarities,andtheirmutualtransf ormationthereby.Italsofamiliarizesstudents withtheworkingoftheIndianstate,payingattentiontothecontr adictorydynamicsofmodernstatepower.
C5	Introductionto ComparativeGovernmentandP olitics	The purpose of the course is to familiarize students with thebasic concepts and approaches to the study of comparativepolitics. More specifically the course will focus on examiningpolitics in a historical framework while engaging with variousthemesofcomparativeanalysisindevelopedanddev eloping countries.
C6	PerspectivesonPublicA dministration	Thecourseprovidesanintroductiontothedisciplineofpublica dministration. Thispaperencompassespublicadministrationinitshistoricalc ontextwithanemphasisonthevariousclassicalandcontempo raryadministrative theories.
C7	Perspectives onInternationalRelationsan dWorldHistory	This paper seeks to equip students with the basic intellectualtools for understanding International Relations. It introducesstudentstosomeofthemostimportanttheoretica l approachesforstudyinginternationalrelations.
C8	PoliticalProcessesand InstitutionsinComparativeP erspective	Inthiscoursestudentswillbetrainedintheapplicationofcompar ativemethods tothestudyofpolitics.
C9	PublicPolicyand AdministrationinIndia	Thepaperseekstoprovideanintroductiontotheinterface betweenpublicpolicyandadministrationinIndia.
C10	Global Politics	Thiscourseintroducesstudentstothekeydebates onthe

		meaningandnatureofglobalizationbyaddressingitspolitical,economic,social,culturalandtechnological dimensions.
C11	ClassicalPoliticalPhilosophy	Thiscourse goesbacktoGreekantiquityandfamiliarizes studentswiththemannerinwhichthepoliticalquestionswerefirstposed.
C12	IndianPoliticalThought-I	ThiscourseintroducesthespecificelementsofIndianPoliticalThoughtspanningovertwomillennia.Thebasicfocusofstudyisonindividualthinkerswhoseideas are howeverframedbyspecificthemes.
C13	ModernPoliticalPhilosophy	Philosophyandpoliticsarecloselyintertwined.Thiscoursewillexplorethisconvergencebyidentifyingfivemaintendencieshere. Studentswillbeexposedtothemannerinwhichthequestionsofpoliticshavebeenposedintermsthathaveimplicationsfor largerquestionsofthoughtand existence.
C14	IndianPoliticalThought-II	Basedonthestudyofindividualthinkers,thecourseintroducesawidespanofthinkersandthemesthatdefinesthemodernityofIndianpoliticalthought.Theobjectiveistostudygeneralthemesthathavebeenproducedbythinkers fromvariedsocialandtemporalcontexts.
DSE-1A	ContemporaryPoliticsinAssam	TheprimaryaimofthispaperisacquaintwiththestudentswiththepoliticsofcontemporaryAssamanditsneighbouringstates.Moreover,beinglocatedintheNortheastregionitis invariablytheconcernofthestudentstohaveproperunderstandingofthe region.
DSE-2A	HumanRightsinComparativePerspective	Thiscourse attemptstobuildanunderstandingofhumanrightsamong studentsthroughastudyofspecificissuesina comparativeperspective.
DSE3A	PublicPolicyinIndia	Thiscourseprovides atheoreticalandpracticalunderstanding ofthe conceptsandmethodsthatcanbeemployedintheanalysis ofpublicpolicy. The coursewillbeusefulforstudentswhoseekanintegrativelinktotheirunderstandingofpoliticalscience,economictheoryandthe practicalworldofdevelopmentandsocialchange.
DSE4A	India'sForeignPolicyinaGlobalizingWorld	Thiscourse's objectiveistoteachstudentsthedomestic sourcesandthestructuralconstraintsonthegenesis,evolutionandpracticeof India'sforeignpolicy.

FYUGP(NEP)			
SEMESTER	**COURSE CODE & NAME**	**COURSE OBJECTIVES**	**COURSE OUTCOMES**
I	PSCC1: Understanding Political Theory	The Objectives of the course are: 1. Analyse the evolution, approaches and relevance of the study of political theory 2. Interpret various schools of thought in political theory	After completion of this course, the learners will be able to: CO1: Analyse the evolution, approaches and relevance of the study of political theory

		3. Illustrate the contemporary perspectives in political theory 4. Explain the different concepts and theories of state and citizenship 5. Assess the nature and diversities of democracy	ILO1.1: Explain the conceptual underpinnings of political theory ILO1.2: Distinguish the different approaches to political theory ILO1.3: Interpret the decline and resurgence of political theory CO2: Interpret various schools of thought in political theory ILO2.1: Compare the tenets of liberal and classical traditions of political theory ILO2.2: Distinguish the basic principles of modern and Marxist traditions of politicaltheory ILO2.3: Infer the contemporary relevance of these select traditions of political theory CO3: Illustrate the contemporary perspectives in political theory ILO3.1: Define the meaning and types of feminist political theory ILO3.2: Explain the meaning, evolution and models of multiculturalism ILO3.3: Describe the meaning and development of post-modernism CO4: Explain the different concepts and theories of state and citizenship ILO 4.1: Interpret the meaning and types of citizenship ILO 4.2: Distinguish the different approaches to citizenship ILO 4.3: Identify the types and functions of state and civil society CO5: Assess the nature and diversities of democracy ILO 5.1: Estimate the nature and functioning of different types of democracy ILO 5.2: Analyse the important debates on democracy

DEPARTMENT OF RURAL DEVELOPMENT (CBCS)

BA PROGRAMME WITH HONOURS IN OTHER SUBJECT AND RURAL DEVELOPMENT AS GENERIC ELECTIVE

GE-RD1	FUNDAMENTALS OFRURALDEVELOPMENT	Togiveatheoreticalbackgroundaboutthe subject ofRural Development along withtheprospectsofitsdimensions.
GE-RD2	RURALECONOMYOFINDIA	Togiveanideaonvariousaspectsofrural economyofIndiaandtheirroleindevelopmento fruraleconomy.
GE-RD3	RURALSOCIETYOFINDIA	Togiveabriefoutlineonsocialsectorofrural Indiaalongwiththeirstatusand problems
GE-RD4	RURALDEVELOPMENTPROGRAMMES ANDINSTITUTIONSININDIA	1. Toimpartknowledgetothelearnersonvari ousruraldevelopmentprogrammescurrentl yoperatedinIndiawhichwillenablethelearne rs to assess theirachievements 2. Thecourseacquaintsthelearnerswiththedi fferent strategiesadoptedbydifferentRuralDevelop mentInstitutionsin India

DEPARTMENT OF COMMERCE

B.COM HONOURS

CommerceUG (CBCS)				
CourseObjectivesand LearningOutcome				
Sl.No.	**Semester**	**Subject**	**Objective**	**LearningOutcome**
1	I	Business Law(C-102)	1. Toimpartbasicknowledgeoftheimportant businesslegislationalongwithrelevantcaselaw. 2. Tomakestudentsunderstanddifferentconcepts and provisionsofbusinesslegislations.	1.Studentswillbeabletolearnbasicconceptsofbusinesslaw. 2. Students will be able tounderstandpracticalimplications of theprovisionsofbusinesslaw. 3.Studentswillbeabletocriticallyanalyzedifferentprovisionsofbusinesslaw.
2		FinancialAccounting(C-103)	1. Togivestudentsabasicunderstandingofmajor financialaccounting concepts andtheir applications. 2. To assist students inunderstandingdifferent financial accounting principles and provisions.	1. Studentswillbeabletolearnbasicconceptsof Financial Accounting. 2. Studentswillbeabletounderstand practical solutionof financial Accounting. 3. Students would be able tocriticallyevaluatevariouspractical Financial accounting solution.
3	II	Corporate Law (C-204)	1. Toimpartbasicknowledgeoftheprovisionsoftheof CompaniesAct2013and the depositories Act,1996. 2. Todiscusscasesinvolvingissuesincorporatelaws	1. Studentswillbeabletounderstand basic concepts ofcorporate law. 2. Studentswillbeunderstand differentprovisionsrelatedtocorporate law. 3. Studentswillbeabletocriticallyanalysetheprovisionsofcorporatelaw. 4. Students will be able applytheprovisionsinreallife.
4		Corporate Accounting (C-203)	To help the students toacquiretheconceptualknowledge of the corporateaccountingand to learn the	1. Students will be abletolearnaboutthejournal entriesofissueofsharesandissue ofdebentures. 2. Studentswillbeable

			techniquesofpreparingfinancialstatements.	to know about the meaningof companies and workingstyle ofcompanies. 3. Students will be ableknowaboutthefinalaccountsofthe companies. 4. Thestudentswillbeabletounderstandthevaluation method of sharesandgoodwilland measurement of performanceofcompanies. 5. Thestudentswillbeabletolearnaboutamalgamation ofcompanies 6. Thestudentswillbeable to prepare accounts forholdinganditssubsidiary companies
5	III	HumanResourceManagement(C-305)	1. To acquaint studentswith the techniques andprinciplestomanagehumanresourceofanorganization. 2. Togivestudentspracticalunderstandingtheoreconceptsandprinciplesofhumanresourcemanagement.	1. Studentswillbeableunderstand the core conceptsofhumanresourcemanagement. 2. Studentswillbeableunderstand differentpractices of human resourcemanagements. 3. Studentswillbeableapplythe conceptsinreallife.
6		Business Statistics (G-303)	1.Tofamiliarisestudents withbasicstatistical tools used formanagerialdecisionmaking.2. Know aboutthe practical implications of statisticaltools.	1.Studentswillbeabletounderstandthestatisticaltools. 2. Students will beabletoapplythestatisticaltools.
7		ManagementPrinciples and Application (C-307)	1. Understandingofbasic managementconcept 2. UnderstandingofmanagementPrinciples andPractices	1. Studentswillbeabletounderstandthebasicmanagement concept 2. Studentswillbeabletounderstandthemanagement PrinciplesandPractices

8		Income Tax Law&Practice(C-303)	1. Toimpartbasicknowledgeoftheprovisions of the IncomeTax&Law&Practices. 2. To discuss practicallysolution involvingissuesIncomeTaxLaw. 3. To teach afundamentalunderstanding of theprovisions of the Incometax Act as well asrelated laws and practices	1.Studentswillbeabletounderstand basic concepts ofIncome tax calculation of allthe employeesandbusinesssector. 3.Studentswillbeunderstand provisions relatedtoIncomeTax. 3.Studentswillbeabletoapply tax calculation in realWorldsituation.
9		Entrepreneurship Development(SE-302)	1. Todevelopandfortifyentrepreneurialquality,i.e.,motivationorneedforachievement. 2. Understand the meritsanddemeritsof becoming an entrepreneur. 3. To developmanagerial skills amongsmallentrepreneursforimproving theperformanceofsmall-scaleindustries.	1. Studentswillbeabletounderstandthebasicentrepreneurshipconcept. 2. Studentswilllearntheuncertaintyinvolvedinrunninga business.
10	IV	RetailManagement(SEC-403)	1. To acquaint studentswith thebasic conceptsofretailmanagement. 2. Togivestudents'practicalunderstandingofthecconceptssothat they can utilise it in reallife.	1. Students will be able tograsptheconcepts. 2. Studentswillbeabletousetherelatedconceptsinreallife.

11		CostAccounting(C-408)	To acquaint the studentswith basic concepts usedincostaccounting,various methods used incostascertainment,and cost accounting bookkeepingsystem	1. Studentswillbeabletolearn basic concepts of costaccounting. 2. Studentswillbeabletounderstandmaterialandlabor cost 3. Studentswillbeabletounderstand overheads 4. Studentswillbeabletounderstandmethodsofcosting 5. Studentswillbeabletounderstandbookkeepingincost accounting 6. Studentswillbeabletounderstandthepracticalimplications of cost accounting
12	V	FinancialManagement(C-512)	Theobjectiveofthiscourseistoacquaintstudentswiththeconceptsoffinancial management.	1. Students will be able tolearnbasicconceptsoffinancial management. 2. Studentswillbeabletounderstandworkingcapitalmanagement. 3. Students will be able tounderstand investmentdecisions. 4. Students willbeabletounderstanddividendpolicy. 5. Studentswillbeabletounderstand the practical implicationsoffinancialmanagement
13		Management Accounting(DSE-501)	This course provides thestudents an understandingoftheapplication of accountingtechniquesfor management.	1. Studentswillbeabletolearn basicconceptsofmanagement accounting. 2. Studentswillbeabletounderstand the preparation ofcash flow statements. 3. Studentswillbeabletounderstandabsorptionandmarginal costing 4. Studentswillbeabletounderstandbudgetingforprofit planning 5. Studentswillbeabletounderstand the practical implications of managementaccounting.

14		AdvanceFinancialAccounting(DSE-502)	Thebasicaimofthispaper is to acquaint thestudentswithadvanced topicsinaccounting.	1. Studentswillbeabletounderstandtheaccountsofbanking companies 2. Studentswillbeabletounderstandtheaccountsof Life Insurance Companies 3. Studentswillbeabletounderstandthe General Insurance Companies 4. Studentswillbeabletounderstand investmentaccounts 5. Studentswillbeabletounderstandthepracticalimplicationsofadvanced financialaccounting
15		Principles of Marketing (C-511)	1. Understandingtheconceptofmarketing. 2. Understandingtheapplications ofmarketing	1. Studentswillbeabletounderstandtheconceptofmarketing. 2. Studentswillbeabletounderstandtheapplications ofmarketing.
16		Consumer Behaviour (DSE-502)G-III	1. Perceivingthestudents,theprinciplesinfluencingconsumerbehaviour. 2. Perceivingthestudents,thefactorsinfluencingconsumerbehaviour. 3. Understandingtheconsumermarket.	1. Studentswillbeabletoperceivetheprinciplesinfluencing consumerbehaviour. 2. Studentswillbeabletounderstandthe factorsinfluencing consumerbehaviour. 3. Studentswillbeableto understandtheconsumermarket.
17		RetailManagement(DSE-502)G-III	1.Acquaintstudentswith distribution methods. 2. Acquaintstudentswithretailingsystem.	1. Studentswillbeableacquaintthemselveswithdistribution methods. 2. Studentswillbeableto acquaintthemselveswithretailingsystem.
18	VI	AdvertisingManagementDSE602(G-III)	The course will acquaintthestudentsabout advertisementand salespromotion.	1. Studentswillbeabletounderstand the importance ofadvertisingin a competitivemarket scenario. 2. Studentswillbeableunderstandthemeritsanddemerits of various advertisingmedia.

19		ServiceMarketing DSE 601(G-III)	Theobjectiveofthiscourseistoacquaintstudents with the natureandformsofservices andtheirmarketingimplications.	1. Students will getan ideaof the scope of venturing intoservicemarketing.
20		Auditing (C-613)	Thecourseaimsatimpartingknowledgeabout the principles andmethods of auditing andtheirapplications.	1. Students will be expectedtounderstandtheobjective of Auditing, theconceptsoferrorsandfrauds,principlesanddifferent typesofaudit. 2. Studentswillbeabletoconstructthefactorsinvolved in preparation ofAuditplanandAuditprogramme. 3. Students will be expectedto evaluatetheimportance of assessmentofinternalcontrolandinternalchecks.Also, theywouldlearnaboutTest checkandAuditsamplingas audittechniques 4. Studentswillbeexpected tounderstandabouttheauditreport
21		GST Law &Practice (C-614)	This courseisintendedto introduce the studentswiththestructure ofIndirect tax in India. Theprinciples of indirect taxand direct taxes are alsobeenincludedforconceptualization of taxstructure.	1. Thestudentsarealsoexpectedtolearntheconceptof GSTanditshistory. 2. They will also learn abouttherecordkeepingaspectsunderGSTregime and filling of GSTreturn periodically as perthepresprescribed procedure. 3. The students will be abletounderstandtheconstitutionalexpectofGST. 4. The students will be ableto calculate GST liability,registration,andpayment oftax.

22		SecurityAnalysis and PortfolioManagement (DSE601)	Theobjectiveofthiscourse is to acquaint thestudents with the basicsof Security analysis andportfoliomanagement	1. The students will be abletounderstandaboutinvestment,investmentanalysisandriskassociatedwiththeinvestment. 2. The students will be abletocomprehendaboutportfolio analysis,diversification andmodelsofdiversification 3. Thestudentswillbeexpectedtoanalyseportfoliowithdifferentpricingmodels 4. The students will be abletomeasureandevaluate portfolio performance andriskandreturn.
23		Financial statement Analysis (DSE602)	Thebasicaimofthiscourse istoacquaintstudents with the skill ofFinancialStatementAnalysis	1. Thestudentswillbeexpectedtolearnthedifferentparametersforevaluating financialstatements using differenttoolsandtechniques. 2. Thestudentswillbeexpectedtounderstanddifferent ratios to evaluatefinancialstatement. 3. Thestudentswillbeexpectedtounderstandfinancialreporting 4. Thestudentswillbeexpected to be understandaboutcorporate socialresponsibility andcorporategovernance. 5. Thestudentswillbeexpectedtounderstandreportingby different financialorganizations.

FYUGP(NEP)			
SEMESTER	**COURSE CODE & NAME**	**COURSE OBJECTIVES**	**COURSE OUTCOMES**
I	C-1: BUSINESS ORGANISATION AND MANAGEMENT	To gain a basic understanding of the structure and forms of business organisations and the primary functions of management that are vital for the	Course Outcome: CO1: Demonstrate the distinctive features of various business organizations.

		smooth operation of businessorganisations.	LO1.1: Cite examples of different forms of organizations. LO1.2: Explain the functioning of different forms of business organizations, theirformation and ownership. CO2: Demonstrate the understating of different functions of management. LO2.1: Explain planning, organizing, controlling and other functions of management. LO2.2: Develop strategic approaches in respect of managerial decision making in case-based events. CO3: Apply the various concepts of authority, delegation of authority and decentralization. LO3.1: Explain how authority and its delegation is to be implemented. LO3.2: Project leadership and team behaviour in classroom role plays that act asprep ups for real organizational contexts. CO4: Apply the theories of motivation for managing human resources in organizations. LO4.1: Explain and differentiate contemporary theories of motivation. LO4.2: Discuss the role and applicability of each motivation theory in the modern organizational context. CO5: Analyze the stand and role of Indian ethos in the context of management in Indianorganizations. LO5.1: Explain Indian ethos in the context of Indian organizations. LO5.2: Implement suitable strategies to deal with different Indian values and

			philosophies in managerial decision making CO6: Analyze the role and pattern of communication in organizations. LO6.1: Explain formal and informal communication channels and processes. LO6.2: Describe the challenges of communication in organizations. CO7: Apply the concepts of subaltern management ideas in real work situation LO7.1: Project the of practice work-life balance, flexi time etc on job situation. LO7.2: Describe diversity and inclusion in work place.

DEPARTMENT OF PHYSICS

M.Sc. PROGRAMME IN PHYSICS(CBCS)

COURSEOUTCOME

COURSECODE	COURSETITLE	OBJECTIVE	COURSEOUTCOME
PH-C-I	**MathematicalPhysics**	1. WriteaprobleminhigherlevelPhysicsinthelanguageinMathematics. 2. Identifyarangeofdiversemathematicaltechniquestoformulateandsolveaprobleminhigherlevelphysics. 3. Analyzevariousmathematicalconceptsandmethods. 4. ApplytheknowledgeandunderstandingofthesemathematicaltechniquestogaininsightintoanumberofbranchesofphysicslikeQuantumMechanics,ElectromagneticTheory,CondenseMatterPhysics,AtomicandMolecularPhysics,NuclearPhysics,ParticleandHighEnergyPhysics, PhysicsofGravityetc.	1. Equipstudentswithrequiredmathematicalskillstosucceedin Physics. 2. Developtheanalyzingabilityofthestudentstosolveproblemsin Physics. 3. Enablethestudentstopursueareasearchcareerin Physicsandwillultimately helptocontributenewknowledge.
PH-C-II	**QuantumMechanics**	1. Acquaintthelearnerswithfundamentalconceptsof QuantumMechanics. 2. AcquaintthelearnerswithDiracnotation. 3. Enablethelearnerstosolvesimplequantummechanical	1. Understandthebasicconceptsof quantummechanics 2. Solvesimplequantummechanicalproblems 3. Understandquantum dynamics

		problems. 4. Introducetheconceptsofsymmetryandconservationlaws 5. Introducethetechniquesofangularmomentumalgebra	4.Writedowneigenvaluesandeigenstatesofangularmomentum
PH-C-III	**GeneralLabI**	1. Todeveloppracticalknowledgebyapplyingtheexperimentalmethodsandtocorrelatewiththe Physics theory. 2. Tolearntheusageofelectricalandopticalsystemsforvariousmeasurements. 3. Toapplytheanalyticaltechniquesandgraphicalanalysistointerpretheexperimentaldata. 4. Tolearnerror propagationanditsroleinmakingconclusions.	1. Learntominimizecontributingvariablesandrecognizethelimitationsofequipment. 2. Describethemethodologyofscienceandtherelationshipbetweenobservationandtheory. 3. Participateinthemethodologybyperforminglaboratoryexercises.
PH-C-IV	**ClassicalMechanics**	1. AcquaintthelearnerswiththesubjectofclassicalmechanicsintheconteXtofthelanguageandmethodsofmodernnonlineardynamics. 2. Enablethelearnerstomakeasmoothtransitionfromclassicalmechanicstoquantummechanicsandnonlineardynamics.	1. Understandthebasicconceptsof LagrangianandHamiltoniandynamics 2. Understandthebasicconceptsofmodern nonlineardynamics 3. Understandcanonicalandnoncanonicalflows 4. Makeasmoothtransitionfromclassicaltoquantummechanics
PH-C-V	**CondensedMatterPhysics**	1.FamiliarizewithfundamentalsofCondensedMatterPhysics.	1.Equipastudentwithbasicconcepts ofCondensedMatterPhysicssothat

		2. Know about different latticestructures,behaviourandimportanceofcrystallinestate, contributionof X-RayDiffractioninCrystallography,importanceofdefectsandimperfectionsinacrystaletc. 3.Understandthebehaviourinsolidsthatdependprimarilyonthemotionofelectronsinsidethesolid.	theknowledgecanbeappliedforfurtherdevelopmentofthesubject. 2. Enableastudent toworkinboththeoreticalandeXperimentalaspectsofCondensedMatterPhysics. 3. Helpthestudentsinthoroughlearningoftheconceptsassociatedtothecoursethroughthenumerical,quizzes,assignments,projects etc.
PH-C-VI	**GeneralLabII**	1. Understandthebasictechniquesofdesignandanalysis of simpletransistorandOPAMPcircuit. 2. Applytheknowledgetodesignandstudydifferentelectronic circuits.	1. Designelectroniccircuitsusingvariouselectroniccomponents. 2. Analyzethecircuitsandunderstandtheirbehaviors.
PH-C-VII	**Electronics**	1. To disseminateworkingknowledgeofelectronicprincipleusingsemiconductordevices 2. To allow students to learn thefundamentals of both analog anddigitalelectronicdevices 3. Toallowstudentstoapplytheirknowledgefordesigningsmallelectronicsystems. 4. Tointroducestudentstoadvanceddigitalsystemslikemicroprocessorandmicrocontroller 5. Toimbibethespiritofapplication	1. Criticallyanalyzeanalogandddigitalelectroniccircuits 2. Designsmallelectronicsystemsasperdesignspecifications 3. Writeassemblylanguageprogramsfordoingsimplearithmeticoperationinmicroprocessorandmicrocontroller. 4. Applytheirknowledgeforreallifeproblemssolving inelectronic
		orientedlearning	

PH-C-VIII	**Electrodynamics**	1. Thiscourseutilizesphysicalandmathematicalprinciplestoprovidein-depthanalysisofthebehaviourofelectricity andmagnetisminmatter. 2. ToapprisethestudentsregardingtheconceptsofelectrodynamicsandMaxwell equationsandusetheminvarious situations.	1. Describethenatureofelectromagneticwaveanditspropagationthrough different mediaandinterfaces. 2. Explainchargedparticledynamicsandradiationfromlocalizedtimevaryingelectromagneticsources. 3. Understandpotentialformulationandmagnetismin relativisticcase.
PH-C-IX	**ComputationalMethods**	1. Get hands on training in problemsolving using FORTRAN languageinLINUXoperating system. 2. Learnvariousnumericalmethodstosolvephysicalproblemsaswellas programmingofsuchmethods.	1. Apply theirknowledgeoncomputerprogrammingandnumericalanalysisinsolving real physicalproblems. 2. Dealwithscientificcomputingindifferentresearch areasofPhysics.
PH-C-X	**NuclearPhysics**	1. Haveabasicknowledgeofthenuclearforceanditsproperties 2. Beabletovisualizethenatureofinteraction of nucleons insidedeuteron nucleusaswellasingeneralnucleon-nucleonscattering 3. Beacquireknowledgeaboutdifferent theoreticalmodelsregarding nucleusaswellastoapply thoseindeterminingnuclearproperties	1. Developknowledgeregarding nucleus,itsproperties, nuclearforce,nuclearreactionsand 22 mechanisms,nucleardetectorsaswellaselementary particlesandthepropertiesrelatedtothem 2. Successfullyapplythesame knowledgeinsolvingproblemsinthefieldofnuclearandparticlePhysics.

		4. Graspknowledgeaboutnuclearreactionsandtheirvariousmechanismsalongwithanwideunderstandingofthedecayprocess 5. Understandthebasicforcesinnatureandclassificationofparticlesandstudyindetailconservationslawsandquarkmodelsindetail 6. Knowabouttheba sicworkingprinciple sofvarious nuclear detectors	
PH-C-XI	**StatisticalMechanics**	(1) TointroducetheadvanceconceptsofStatisticalMechanicssothatstudentswillbeequippedwithasufficientknowledgeofthesubject. (2) Todevelopthecriticallythinkingabilityofstudentstounderstandthediversephysicalphenomena. (3) Todeveloptheinterest andabilityamongstudentstosolvedchallengingphysicalproblems bytheapplicationofte chniquesof StatisticalMechanicsinfuture.	(1) ThestudentswillbeequippedwithasufficientknowledgeoftheStatisticalMechanicsandhencewill beabletolook criticallyforanalyzinganyphysical phenomena. (2) Maymotivatestudentstosolveanychallengingphysicalprobleminfuture. (3) Willdrawinteresttothesubject topursuefurtherhigher studyinfutureandwillultimatelyhelptocontributenewknowledge.
PH-C-XII	**AtomicandMolecularPhysics**	1. Learnthephysicsoftheatomsandmolecules 2. Becomefamiliarwithvariousbranchesofspectroscopyandtheirapplications	1. Determine the atomic and molecularstructures 2. Analyze and demonstrate a spectra toidentify and quantify information aboutatoms andmolecules

		3. Equipwithbasicspectroscopictechniquesandinstrumentation 4. Learntousespectroscopictechniquestoidentifymaterials 5. Learn theoretical background oflaser and its application in variousdisciplines	3. Demonstratetheinteractionofelectromagneticspectrawithmatterandtheassociatedtypeofspectroscopy 4. Identify elements present in a sampleand in the universe using spectroscopictechniques 5. Applyknowledgeofspectroscopyorlaser spectroscopy invariousdisciplines of Physics, Chemistry,AtmosphericScience,Astronomy,LaserCommunication,remotesensing etc
PH-DSE-IA	**TheoryofRelativity**	1. Acquaint the learners with thespecial theory of relativity, spacetimecontinuum. 2. Introducethebasic conceptsoftensorcalculus 3. Introducethelearnerstothegeneraltheoryofrelativity	1. Understandtheideasofspacetimecontinuum,fourvectors. 2. Understandtensorsasgeometricalobjects,understandcoordinatefreeformulationofphysicallaws. 3. Understandthebasicideasof geometricalformulationofgravity. 4. Understandbasicideasofcosmology.
PH-DSE-IB	**AtmosphericPhysics**	1. Introducethephysicsandchemistryoftheearth'sneutralatmosphere. 2. Giveanindepthintroductiontotheatmospherictthermodynamic.	1. Acquaintedwiththedifferentlayersoftheatmosphereandtherelated physicalphenomena. 2. Developsimplemodelsof theatmosphere.

		3.Introduceatmosphericaerosolsandanalyseitsimpactontheglobalclimate.	3. Understandtheopticallandmicrophysicalpropertiesofaerosol. 4. Understandtheatmosphericchemistryoftracegases.
PH-DSE-IIA	**PlasmaPhysics**	1. Understandcollectivenatureofplasmadynamics. 2. Describethemotionofchargedparticlesinvaryingelectricandmagneticfields. 3. Derivefluiddescriptionofcollectiveplasmamotion. 4. Learnfoundationsofplasmawavesandinstabilities.	1. Defineplasmaanditsfundamentalparameters,distinguishthesingleparticleapproach,fluidapproachandkineticstatisticalapproachtodescribedifferentplasmaphenomena 2. Determinethevelocities(driftvelocities)ofchargedparticlesmovinginelectricandmagneticfieldsthatareeitheruniformorvaryslowlyinspaceandtime 3. Classifytheelectrostaticandelectromagneticwavesthatcanpropagateinmagnetisedandnon-magnetisedplasmas,anddescribethephysicalmechanismsgeneratingthesewaves 4. Defineanddetermineteasictransportphenomenasuchasplasmaresistivity,diffusion(classicalandanomalous)andmobilityasafunctionofcollisionfrequencyandofthefundamentalparameters forbothmagnetisedandnon-magnetisedplasmas

PH-DSE-IIB	**Advanced Quantum Mechanics**	1. Acquaintthelearnerswiththeap proximationmethodsinQuantum Mechanics. 2. Introducethequantummecha nicaltreatmentofscattering 3. Introducethelearnerstoth erelativisticquantummecha nics	1. Understandtheideaof differentapproximation techniquesinquantumm echanics 2. Understandthequantu mmechanicalapproachto scattering 3. Understandtheconseque ncesof incorporatingspec ialtheoryofrelativi tyinquantummech anics.
PH-DSE-IIIA	**HighEnergyPhysi csI**	1. Expressphysicalquantities innaturalunits. 2. Explainthephysicsofrelativisti cwaveequations. 3. Usetheformulationofquantu mfieldtheory inanumberoffields. 4. Applytheconceptsofquantu mfieldtheorytoquantumelectro dynamics.	1. Afterthecompletiono fthiscourse,itisexpected thatthiscoursewill 2. Enableastudentto acquirethebasicsofq uantumfieldtheorya ndrealizeitsimporta nce. 3. Enablea student toapplytheframeworko ffieldtheorytoquantum electrodynamics. 4. Prepareastudentforadv ancedtopicsinfieldtheory andparticlephysics. 5. Motivateastudenttopu rsueacareerinhighenergy physics.
PH-DSE-IIIB	**CondensedMatte rPhysicsI**	1. Gather a broader knowledge ofElectronicPropertiesofSolid s. 2. Understand the chronology in theDevelopment of the Electron theoryinMetals. 3. Understandcomparativelythe	1. Equipa student withquantummechanic altoolsforthesolutionof CondensedMatterPhys icsproblems. 2. Enableastudent toworkinboththeoretical andexperimentalaspects of ElectronicBehaviorof Solids.

		PolarizationandMagnetizationbehaviorinasolid.	3.Enablethestudentsforfurtherstudyandcontributiontowardsthedevelopmentofthesubject.
PH-DSE-IIIC	**CommunicationElectronics**	1. Understandthebasictechniquesofelectroniccommunicationlikemodulation,multiplexingetc. 2. Applytheknowledgetounderstandthecurrentgenerationcommunicationtechnologies.	1. Identifythebasictechniquesofcommunicationlikemodulation,multiplexing. 2. Analyzethemodulationsschemesandtheirapplicability.36 3. Analyze present generation systemsrelated to microwave communication,cellularcommunications,satellite communication.
PH-DSE-IIID	**AdvancedMathematicalPhysics**	1. Writeacomplexprobleminhigherlevel PhysicsinthelanguageinMathematics. 2. IdentifyarangeofdiversemathematicaltechniquestoformulateandsolveacomplexprobleminhigherlevelPhysics. 3. Analyze various mathematicalconcepts and methods required inhigher levelPhysics. 4. ApplytheknowledgeandunderstandingofthesemathematicaltechniquestogaininsightintoanumberofadvancebranchesofphysicslikeTheoreticalPhysics,ParticleandHighEnergyPhysics,PhysicsofGravity,Cosmologyetc.	1. EquipstudentswithrequiredmathematicalskillstosucceedinPhysics. 2. Developtheanalyzingabilityofthestudentstosolvecriticalproblemsin Physics. 3. Enablethestudentstopursuearesearchcareerin Physicsandwillultimately helptocontribute newknowledge.

PH-DSE-IIIE	**LaserSpectroscopyI**	1. Familiarizewithvariousbranchesofspectroscopy 2. Equipwiththeknowledgeonspectroscopictechniquesandinstrumentation 3. Learnto usespectroscopictechniquestoapplyinwiderangeofareas 4. Learntheoreticalbackgroundoflaser,itsimportanceas spectroscopiclightsourceanddifferenttypes	1. Understandandexplainfundamentalconceptsinlasers pectroscopy 2. Comparethefunctionand propertiesofdifferenttypesoflasers 3. Uselaserspectroscopicinstrumentsinpracticeinphysicsandallieddisciplines 4. Demonstratetheproduct ionmechanismofconventionalaswellasultrafastlasers
PH-DSE-IVA	**HighEnergyPhysicsII**	1. Classifytheelementaryparticlesandtheirinteractions. 2. Explainthephysicsoffundamentalparticlesandtheir interactions. 3. Analyzetheformulationofgrouptheory. 4. Applygrouptheorytoquarkmodelanddifferentinteractions.	1. Enable a student to acquire the basicknowledge of elementary particles andtheirinteractions. 2. Enablea student toapplytheframeworkofgrouptheorytoparticlephysics. 3. Prepareastudentforadvancedtopicsinfieldtheoryandparticlephysics. 4. Motivateastudenttopursueacareerinhighenergyphysics.
PH-DSE-IVB	**CondensedMatterPhysics II**	1.Providebasicknowledgeon Latticevibrationandsomeproperties ofsolidrelatedtolatticevibration.	1. Usetheknowledgeinfabrication ofdifferentthinfilms emiconductordevices. 2. Pursuesomeresearchorproj ect

		2. Developthebasicknowledgeofthethinfilm Physics.Itwillprovidetheknowledgeofpreparationandcharacterizationofthinfilmsanditsapplicationindevices. 3. Enhancethekno wledgeonsemicond ucting propertiesandoptic aleffectinsemicond uctors.	workonsemiconductin gthinfilmdevice.
PH-DSE-IVC	**DigitalandOpticalElectronics**	1. Introduce students tomicrocontrolleran dprogrammingforbu ildingdigital systems. 2. Introducestudentstod igitalsignalandsignalpr ocessingprinciples 3. Introducestude ntstoopticalelectr onicsystems 4. Providestudents withfundamentalpri nciplesofopticaldev ices 5. Introducestude ntstoopticalcom municationsyste ms	1. Criticallyanalyzemicr ocontrollerbaseddigital electroniccircuits 2. Writeassembly languageprogramsformicro processorandmicrocontrolle rcontrolleddevices. 3. Analyzeopticalelectronicd evices 4. Criticallyana lyzeopticalcom municationsyst ems 5. Applytheknowledgeofo pticalelectronicstomakein novativeopticalproductsfo rreallifeproblemsolving.
PH-DSE-IVD	**SpacePhysics**	1. IntroducetheP hysicsoftheEarth ’sionosphere. 2. Introducetheatmos pheresofthesolarsyste mplanets. 3. IntroducethePhysicsof theSun.	1. Understandthebasicplas maprocessintheEarth’siono sphere. 2. Acquaintedwit hplanetaryatmos pheres. 45

		4.Introduceradioastronomy.	3. LearnaboutSun,Solarwind,CME,solarwindinteractionwiththemagnetosphere,Solar-Terrestrialenvironment. 4. Understandthefundamentalsofradioastronomy.
PH-DSE-IVE	**LaserSpectroscopyII**	1. Understandthebasicprinciplesofnonlinear spectroscopy 2. Familiarizewithprinciples andinstrumentationsinmodernnonlinearspectroscopy 3. Equipwiththeknowledgeondifferenttechniquesoflaser Ramanspectroscopyandapplications 4. Familiarizewithrecentdevelopmentsin LaserSpectroscopy	1. Understandandexplainconceptsinnonlinearspectroscopy 2. Demonstratetheuseofmodernlaserspectroscopicinstrumentsinpractice 3. Demonstratetheadvantagesof useof laser spectroscopy in recentdiscoveriesinPhysics andvariousotherareas 4. Uselaserspectroscopictechniquesinresearch.
PH-DSE-VA	**HighEnergyPhysicsIII**	1. Explainthebasicsofgaugetheories. 2. Analyzesymmetrybreakingingaugetheories. 47 3. ApplytheknowledgeofgaugetheorytoQCD. 4. Outlineanumberofareasinbeyondthestandardmodelphysics.	1. Enableastudenttoacquiretheb asicknowledgeofgaugetheories. 2. Enableastudenttofamiliarizewiththestandardmodel. 3. Prepareastudentforadvanceddtopicsinfieldtheoryandparticlephysics. 4. Motivateastudenttopursueacareerinhighenergyphysics.

PH-DSE-VB	**CondensedMatter PhysicsLab**	1. Gather abroaderknowledgeontheexperimentaltechniquesofsolidstatePhysics 2. Understandthebasicconceptsinhandsonmodethroughthebasicsolidstatephysics experiments.	1. Equipa student withdifferentexperimentaltechniquesusedfor determinationofvariouspropertiesofsolids. 2. Enhancethelaboratoryskill ofastudent whichwill helpa studenttoexperimentalresearchworkinthearea. 3. Enableastudenttounderstandthesubjectinsomemoredetail.
PH-DSE-VC	**ElectronicsLab**	1. Toallowstudentstolearntheelectronicprinciplesusinghands-onphilosophy 2. Toallowstudentstodesignsmallanalogcircuitsystemslikesmallsignalamplifier,filtercomparatoretc. 3. Toallowstudentstoapplytheirknowledgefor assembly languageprogrammingtodoarithmeticoperationsandmakesmalldataprocessingsoftware. 4. Tointroducestudentsto usemicroprocessor andmicrocontrollertointerfaceperipheral devices 5. Tointroducestudentstoradiationpattern of antenna throughmeasurement.	1. Designsmallelectronic circuits 2. Writeassemblylanguageprogramtodoarithmetic,logicalanddataprocessingoperations 3. Analyzeantennaradiationpatternandcharacteristicsforreallifeapplication 4. Understandtheworkingofopticalelectronicscomponents

		6.Tointroducestudentstooptical electronics components andmeasurements.	
PH-DSE-VD	**SpacePhysicsLab**	1. Tofamiliarisestudentswithbasic toolsusedinthestudyofSpacePhysics 2. Toprovidestudentswithhandson trainingofparametersassociatedto SpacePhysicsstudy	1. Astudentwillbeablet ooperatebasictoolslike Ozonometer,aethalom eter,scintillationmonit oretc. 2. Thehandsonexperienc ewillenable astudent topursuefurtherstudyine xperimentalSpacePhysic scurriculum
PH-DSE-VE	**LaserSpectroscopyLab**	1. Useandhandlespectroscopi cinstrumentsinlaboratory 2. Understandtheprinciplesoflaser spectroscopythroughperformance ofexperiments 3. Provideexposureinpractical applicationofspectroscop icinstruments.	1. Handlevariousspectr oscopicinstrumentsinla boratoryandusethosein research 2. Demonstratetheuseso f variouslaserspectroscop icinstrumentsinthefield sofinterest
PH-GE-A	**BasicQuantumMecha nics**	1. Know about the development ofmodern Physics and the theoreticalformulationofquantum mechanics. 2. Knowtheapplicationsofquantum mechanicsinsolving physicalproblems.	1. Understandtheap plicationsofquantum mechanicsinotherare asofscience. 2. Applyquantumthe orytophysicalproble ms.
PH-GE-B	**FoundationofElectro nics**	1. Knowaboutthebasicsofsemic onductorPNjunction,itsvarioust ypesanditsapplicationtodifferent electronic circuits. 2. Understandbipolarjunction transistoranditsapplicationsas	1. Learnthefoundatio nknowledgeofanalog electronicsystems. 2. Learntheworkinga ndapplicationsofPNju nctionandbipolarjunc tiontransistors (BJT).

		amplifierandoscillators. 3. Familiarize with operationalamplifiers, its applications andanalysis. 4. Developknowledgeaboutanalogtodigital anddigital toanalogconversiontechniques	3. LearntoanalyzecircuitscontainingPNjunctionandBJTalongwiththeapplicationofBJTasamplifiersandoscillators. 4. Developbasicknowledgeofoperationalamplifieranditsapplications
PH-GE-C	**FundamentalsofMaterialScience**	1. Thestructureofcrystallinematerials 2. The behaviourofconductionelectronsincrystallinematerialsandtheformationofenergybands 3. Varioustypesofphenomenalikemagnetismandsuper-conductivity 4. Nanomaterialsandtheirinteresting properties	1. Differentiatebetweendifferentlatticetypesandexplaintheconceptsofreciprocallatticeandcrystaldiffraction 2. Predictelectricalandthermalproperties ofsolidsandexplaintheirorigin 3. Explaintheconceptofenergybandsandeffectofthesameonelectrical properties 4. Explainvariousty pesofmagneticphenomenon 5. Explainsuperconductivity 6. Gatherknowledgeontheunderlyingprinciplesgoverningthefascinatingbehaviourofnano-materials

PH-GE-D	**ThermalPhysics**	1.Developknowledgeof thermodynamicalproperties ofmatter.	1.Developcriticalandanalytical thinkingonthermodynamicsandallieddisciplines.
		2. Understandthethermodynamicspresentinalliedfieldslike Materialsscience,CondensedmatterPhysics,AtmosphericPhysics, Solar Physics,etc.	2.Usetheconceptofthermodynamicsinrealworldexperiences.
PH-GE-E	**ClassicalMechanics**	1. Acquaintthelearnerswiththe LagrangianandHamiltonianformulationofmechanics 2. Enablethelearnerstounderstandtheideaofnormal modesandnormalcoordinates. 3. Introducethestudentstorigid bodydynamics	1. Understandthebasic conceptsofLagrangian andHamiltoniandynamics 2. Understandtheideaofnormalcoordinatesandnormalmodes 3. Understandrigidbody dynamics
PH-GE-F	**Meteorology**	1. Familiarizewiththestructureandcompositionoftheatmosphereof Earthandotherplanets 2. Providebasicknowledgeonthweather,climateandotheraspectsofatmosphere 3. Provideknowledgeonmeteorological parameters andtheirmeasurementtechniques 4. Familiarizewithweatherforecasting	1. Demonstratethevariousatmosphericphenomenaandtheirevolution 2. Usemeteorological parameterstoexplainobservationsinAtmosphericPhysics,LifeSciences,EnvironmentalScienceetc. 3. ApplythelawsofPhysicstoexplainAtmosphericphenomena 4. Optforinterdisciplinaryresearch

PH-GE-G	**ElementsofModernPhysics**	1.UnderstandthetheoreticalbasisfortheunderstandingofquantumPhysicsasthebasisfordealingwithmicroscopicphenomena.	1.Gatherknowledgeaboutvariousconceptsof ModernPhysicssuchas quantumphysics,atomic,nuclearphysicsandparticlephysics,Laseretc.
		2. Applyconceptsof 20thCenturyModernPhysicstodeducethestructureofatoms. 3. Explainthewave-particledualityofthephoton. 4. Analyzethestructureofmatteratitsmostfundamental. 5. Developinsightintothekeyprinciplesandapplicationsof NuclearPhysics 6. Learn about different types offundamental particles along withvariouselementaryparticles 7. Understandthebasicprinciple ofLaser	2. Successfully apply the sameknowledgeinsolvingproblemsinthefieldofModernPhysics.
PH-AEC-IA	**ExperimentalTechniques**	1. Understandthebasicconcepts oferrorsinmeasurementsandtechniquesofdataanalysis. 2. Understandtheprincipleof sensorsandtransducersandOPAMP	1. Identifytheerrorsinmeasurement. 2. Analyzetheworkingofvarioussensorsandtransducers.
PH-AEC-IB	**ObservationalAstronomy**	1. Introductiontoobservationalastronomy. 2. FamiliarisationofCoordinatesystems, telescopesandobservationalinstruments(CCDs,filters, spectrographs)	1. Developtheknowledgeofhandlingtelescopesandothermodernimageprocessingdevices. 2. Describetheeffectsofthepropertiesoflight andEarth'satmosphereonastronomicalobservati

			ons,coordinatesystemf or stars
		3. Familiarisationof Observationalmethodsandtechniq ues.	3.Acquiretheknowled geofphotometryandmu ltiwaveastronomy
PH-AEC-IIA	**NanoStructure dMaterials**	1. Provideasystematiccoverageа ndinsightintothepromisingareaof nanomaterialsinordertofacilitatet heunderstandingofthenatureandp rospectsforthefield. 2. Discussaboutvarioustypesofn anomaterialswithspecificexampl es of semiconductingnanomaterialsin variousdimensionsandcarbonbas ednanomaterials,viz.,fullerenean dcarbonnanotubes 3. Provideinformationaboutvario ussynthesisandcharacterizationte chniquesofnanomaterials 4. Discusswideapplication sofnanomaterials	1. Knowtheunderlyin gprinciplesgoverning thefascinatingbehavi orofnanomaterials 2. Gatherknowledgeab outsomeofthemodernpr omisingnanomaterialss uchasquantumdots,car bonnanotubesetc. 3. Learnthevarious methodsforsynthes isandcharacterizati onofnanomaterials aswellastheirwide varietyofapplicatio ns
PH-AEC-IIB	**VacuumTechnique**	1. Tointroducethetheory ofvacuumtothestudents. 2. Comprehensionofthermaland flowbehaviourofgasesatverylo wpressures. 3. Methods of achieving andmeasurementlow pressures.Vacuumpumpsandvac uummeters.	1. Recognizetheimport anceofvacuuminmoder ntechnologyandresearc h 2. Basicsofkineticth eoryofgases,pressur e, particlecollisions, velocityandfreetraje ctory 3. Vacuumpumps:clas sification,basictypes,

			rangeofapplication;vacuummeters:classification,basictypesandrangeofapplication.
PH-AEC-IIC	**Meteorology**	1. Makefamiliar withtheEarth'satmosphereaswellastheweatherandclimatesystems 2. Providebasicknowledge onmeteorological parameters andtheirmeasurementtechniques 69 3. ApplythelawsofPhysicsto explainAtmosphericphenomena 4. Getfamiliarwithweatherforecasting	1. Demonstratethevariousatmosphericphenomenaandtheirevolution 2. Solveproblemsintheatmosphericsciencesandrelateddisciplines 3. Impartexpertiseinsub-disciplinesofatmospheric science or relatedinterdisciplinary areas 4. Developskillsforinterpretingandapplyingatmosphericobservation 5. Serveasameteorologist,climatescientist,takepartinpolicy making
PH-AEC-IID	**Dissertation/Project**	.....	.....

DEPARTMENT OF BOTANY

BScPROGRAMMEWITH MAJORIN
BOTANY(NCBCS)
COURSEOUTCOME

Sl. No.	Subject	Course Code	CourseTitle	Objective
01	BOTANY	BOTMT-101	Algae,Fungi andLichen	Themainobjectiveofthiscourseisto providebasicknowledgeofthallus, morphology,reproductionand evolutionoflowercryptogramsand plantpathology.
02		BOTGT-101	LowerCyrptograms(Algae,Fungi,Bacteria& Virus,PlantPathology, Lichen)	
03		BOTMT-201	PlantPathologyand Bryophytes	Themainobjectiveistoprovide fundamentalknowledgeonthe structure,morphology,reproduction, alternationofgenerationandtissue organizationandsporedispersal mechanisminBryophytes.
04		BOTGT-201	Bryophyte,Pteridophytes andGymnosperms	Themainobjectiveofthiscourseisto introducetheundergraduate studentswiththebasicknowledgeof structure,forms,and reproduction, evolutionoftissuesystems,seed habitinhighercryptogramsand gymnosperms.
05		BOTM-301	Pteridophytes, Gymnospermsand Palaeobotany	Themainobjectiveofthiscourseid toprovidecomparativeaccountof structuralmorphology,distribution anatomy,reproductionandevolution ofseedhabitinhighercryptograms; special emphasisistobegivenonthe stellarstructureandevolutionary links.
06		BOTMT-303	Microbiologyand Biotechnology	Themainaimofthiscourseisto introducethestudentswiththebasic knowledgeandmicrobiologyand biotechnologyinthelightofrecent developments.
07		BOTGT-301	Morphology,taxonomy, developmentand reproductionof angiosperms	Themainobjectiveofthiscourseisto introducetheundergraduate studentswiththeterminologiesused indescriptionofangiospermicplants, basicknowledgeofplant classification,tissuesandtissue systems,developmentofprimaryand secondaryplantbodiesand

				development of male and femalereproductivecomponentsandth eir functions.
08		BOTMT-401	Morphology andtaxonom y ofAngiosper ms	The main aim of this course is toprovide fundamentals of Angiospermmorphology and classification withspecialreferencetothepolygenerid relationshipsofvarioustaxa.
09		BOTMT-403	Cell Biology and ModernLaboratoryTe chniques	Themainobjectiveofthiscourseistoprovid e fundamental knowledge ofstructural and functional aspects ofcell and cell organelles and the toolsandtechniquesusedinmodern biologicalstudy.
10		BOTGT-401	Physiology and economicbotany	Themainobjectiveofthiscourseistointrod uce the undergraduatestudents with the basic knowledge ofphysiological activities of plantsthrough the mechanisms ofabsorption of inorganic componentsand production and functions oforganiccomponentsandroleof externalfactorsuponthem.
11		BOTMT-501	Development andreproducti on inangiosperm	Themainobjectiveofthiscourseistoprovid e fundamental knowledge ofstructural and functional aspects ofcell and cell organelles and the toolsandtechniquesusedinmodern biologicalstudy.
12		BOTMT-503	Genetics and plantbreeding,bios tatistics	Themainobjectiveofthiscourseistointrod uce the students with the basicknowledge on plant genetics andapplicationofgeneticsfor improvementofcrop,applicationofstatis ticsinbiology.
13		BOTMT-505	Functionalandchemi calbiology	Themainobjectiveofthiscourseistointrod uce the students with the basicknowledge of modern approaches tofunctionalandchemical biologyof plants.
14		BOTMT-507	Plant ecology,phytoge ography andevolution.	Themainobjectiveofthiscourseistointrod uce the students with the basicprinciples and concepts of plantecology, structure and function ofnatural plant units, habitatdegradation and role of plant onimprovementofhabitat,conservatione cology, phytogeographyandevolution.
15		BOTGT-501	Cytogenetics, evolutionandbiostat istics	Themainobjectiveofthiscourseisto introduce the undergraduatestudentswiththebasickno wledgeof

				structures and function of cell andcell organelles, genetic materials,principles of genetics, modernconceptsofevolutionandthe statisticaltoolsuseful inbiology.
16		BOTMT-601	Plantphysiology	Themainobjectiveofthiscourseistointroduce the students with the basicknowledgeonmajorphysiological aspectsofplants.
17		BOTMT-603	Molecular biology andimmunology	Themainobjectiveofthiscourseistointroduce the students with thefundamentalsofmolecularbiology andimmunology.
18		BOTMT-604	Biophysics andbioinformatics	Themainobjectiveofthiscourseistointroduce the students with the toolsand techniques of physical andcomputersciencesusedinbiological study.
19		BOTMT-606	Agrotechnology andsustainableutilizationofplants	Themainobjectiveofthiscourseistoprovide students comprehensiveknowledgeofusefulnessofplant resourcesforhumanwelfare.
20		BOTGT-601	Biochemistry, plantecology and plantgeography	Themainobjectiveofthiscourseistointroduce theundergraduatestudents with the basic knowledge ofacidbaseconceptanditsimportance,importance of macromolecules,ecological importance of plants, theirdistributionandecosystemstructure andfunction ofecosystem.

FYUGP(NEP)			
SEMESTER	**COURSE CODE & NAME**	**COURSE OBJECTIVES**	**COURSE OUTCOMES**
I	BOT-C-01:Algae, Fungi, Bryophyte&Pteridophyte	Course Objectives are: 1) understand the various groups in the Kingdom up to pteridophytes 2) compare various organisms based on morphology and reproduction 3) classify different groups of plants	Course outcomes are: 1) describe different groups of the plant kingdom like algae, fungi, bryophyte & pteridophyte 2) organize the organisms into different categories based on morphological Characteristics 3) analyze the interrelationship among different species and genera within each group of plants

DEPARTMENTOFCHEMISTRY

BSc PROGRAMMEWITH HONOURS/MAJOR IN CHEMISTRY(CBCS)

COURSEOUTCOME

SlNo.	Semester	CourseNameandCode	Outcomeand/orObjectives
1	1st SEMHons.	CHEMISTRY-C-101 (Inorganic Chemistry)	To develop the basicknowledgeofchemistryinrelationtoatomic Structure, bonding, periodicityetc. ExpectedLearnerOutcome:Studentswillgainanunderstandingof i. Sign of wave function, counterboundary and probabilitydiagramsetc. ii. Variations of orbital energywithatomicnumber. iii. Propertiesof elements,atomic radii, ionic radii, sizeeffect of ionic bond, solvationenergy, covalent character ofionic bond, redox equations,principleinvolved involumetricanalysisetc.

2	1st SEMHons	CHEMISTRY-C-102 (PhysicalChemistry)	Objective of the Course: Toemphasizeondifferentstatesofmatter & their mechanicaltreatment. ExpectedLearnerOutcome: Studentswillgainanunderstandingof i. Kinetic molecular model of agas,behaviourofrealgasesetc ii. Effect of addition of varioussoluteonsurfacetensionandviscosity.Cleansing actionofdetergents. iii. Nature of solid state,elementaryideaofsymmetry. iv. Idea of solubility andsolubility product of sparinglysolublesalts.
3	3rdSEM Major	Paper:MM301 InorganicChemistry-I	Objective: To understandCoordination Chemistry,mechanismandtheimportanceofd-andf blockelements.

4	3rdSEM Major	Paper:MM303 OrganicChemistry-I	Objective:Importance ofHalogenated Hydrocarbons,ChemistryofCarbonylsalong-with sulphurcontainingcompoundarediscussedinthis course.
5	3rdSEM NM	Paper:NM301 OrganicChemistry-I	To understand OrganicChemistry in the light ofdifferenttypesofreaction–to goforthestudyof broadfieldofOrganicChemistry.
6	5th SEMMajor	Paper:MM501 Physical ChemistryII	This course is designed toimpart the ideas of kinetics,solutionequilibriumandsurfacephenomena amongst thestudents.
7	5th SEMMajor	Paper:MM503 InorganicChemistryII	The objective of the paper is togive knowledge onorganometallic compounds,Clusters and organic reagentsininorganicanalysis.
8	5th SEMMajor	Paper:MM505 OrganicChemistry-III	To acquire knowledge indifferent types of organicreactionandtounderstandBiochemistry.

9	5th SEMMajor	Paper:MM507 SymmetryandQuantumChemistry	The objective of the paper is tohave knowledge on quantummechanics with specialreferencetoclassicalmechanics, symmetry andbonding.
10	5th SEMNM	Paper:NM501 InorganicChemistry-II+Physical Chemistry-II	Inthiscourse/paper,nuclearchemistry, preparativechemistry,Bio-Inorganicas well as the importance ofelectrochemistry, surfacephenomenaandphotochemical processesaredealtwith.
	2nd SEMHons	CHEMISTRY-C-201 (OrganicChemistry)	Objective of the Course: Todeveloppreliminaryknowledgeinbasicorganicchemistry, Hydrocarbons, stereochemistry&conformationalanalysis. ExpectedLearnerOutcome: Studentswillgainanunderstandingof--- i.Knowledgeofbasicorganicchemistry, definition,classificationof stereoisomerism, opticalactivity,absoluteandrelativeconfigurationetc.

			ii.Knowledgeofeliminationr eaction, electrophilic andnucleophilicaddition. iii.Relativestabilityofcyclichy drocarbon, Bayer's straintheoryetc.
	2nd SEMHo ns	CHEMISTRY-C-202 (PhysicalC hemistry)	Objective of the Course: Todevelopastrongknowledgeo nchemicalthermodynamics,The ir mathematical expression&application. ExpectedLearnerOutcome: Studentswillgainanunderstа ndingof i.Theapplicationofmathematica ltoolstocalculatethermodynami cproperties ii.Theconcept of freeenergychange andspontaneity. iii. Thermodynamics derivationof relation between Gibbs freeenergyofreactionandreacti onquotient. iv. Derive relation between thefourcolligativepropertiesusin gchemicalpotential(Thermodyn amicsderivation)

13	4th SEMMajor	Paper:MM401 PhysicalChemistry-I	Electrochemistry is one of thetopics that really revolutionizedthe world nowadays. This paperdealswiththisparticularaspect.
14	4th SEMMajor	Paper:MM403 OrganicChemistry-II	This paper deals with activemethylene compounds,aliphaticandaromaticamines andheterocycliccompounds
15	4th SEMNM	Paper:NM401 PhysicalChemistry-I	To understand PhysicalChemistry in the form ofPhysicalforceswhichgovern Oursurroundings.
16	6th SEMMajor	Paper:MM601 Physical ChemistryIII	To understand different topicslike photochemistry,macromolecules,catalysisand Statisticalthermodynamics.

17	6th SEMMajor	Paper:MM603 InorganicChemistryIII	To understandBio inorganicChemistry, Roleofmetalioninbiological system, Metal ion inmedicine, material chemistry,supra molecular interaction,Solid state reactions. Nanomaterials, ChromatographicMethods, Industrial chemistry,Metaltoxicology
18	6th SEMMajor	Paper:MM605 Organic ChemistryIV	This paper highlights theconceptofdisconnectionapproach in organic chemistryas wellasdifferentanalyticaltoolslike UV, IR, NMR in organicchemistry.Importanceofdyes, lipids,polymersarealsodealtwith.
19	6th SEMMajor	Paper:MM607 MolecularSpectroscopy	This paper deals with theinteractionofelectromagneticradiationwithmatterin Variousforms.

20	6th SEMN M	Paper:NM601 OrganicChemistry-II	TounderstandthepreparativeOrganic Chemistry as well astheimportanceof OrganicChemistryinlifeprocesses.

FYUGP(NEP)			
SEMESTER	**COURSE CODE & NAME**	**COURSE OBJECTIVES**	**COURSE OUTCOMES**
I	C-01:Inorganic + Physical + Organic	To give idea about the basic knowledge of chemistry in different field of specializations (viz.inorganic, organic and physical chemistry)	After the completion of this course, the learner will be able to: CO1: Develop a solid understanding of fundamental concepts in periodic properties, bonding, gas and liquid properties, organic chemistry, and stereochemistry. CO2: Apply theoretical knowledge to solve problems and predict chemical behavior. CO3: Perform experimental techniques proficiently, analyze data, and draw accurate conclusions. CO4: Enhance critical thinking, analytical skills, and the ability to communicate scientific information effectively.

DEPARTMENT OF ELECTRONICS

BSc PROGRAMME WITH HONOURS IN ELECTRONICS(CBCS)

COURSEOUTCOME

COURSECODE	COURSETITLE	OBJECTIVE	COURSEOUTCOMES
ELECTRONICS-C-1	**BASICCIRCUITTHEORYAND NETWORKANALYSIS**	1.Understandthebasiccircuit concepts anddeviceslikeresistors, capacitorsandinductors. 2.PerformACandDCcircuitanalysis. 3.Workwithdifferenttheoremsofnetworkanalysis.	1.Acquirethefoundationknowledgeaboutvoltage,current andpassivedevices. 2.AnalyseACandDCcircuitsusingavailabletechniques. 3. Analyse different types ofnetworks using the standardnetworktheorem.
ELECTRONICS-C-2	**MATHEMATICSFOUNDATIONFORELECTRONICS**	1. Acquirethemathematical skillsandlearnthetechniques thatarenecessarytoembarkonthefieldofelectronics. 2. Identify,formulateandsolvecomplexproblemsinmathematics. 3. Gainthemathematical foundation,includingdifferentiationand	1. Apply concepts to domathematical modellingandanalysisofnumericalmethods. 2. Developtheirknowledgeandskillsforelectronics,throughaspecialistpathway. 3. Performindependentresearchtohelpdefinethefrontiersofknowledgeinelectronicsorrelatedinterdisciplinaryareas.

		integration,multi-variablecalculus,linearalgebra,differentialequations, complex variables,probabilityandstatisticsetc.whichwillhelpinthestudyofthebroadsubjectelectronicsinamuchconvenientway 4.Apply thisknowledgetowardsmodellingandsolutionofproblemsinelectronicswiththehelpofadvancedmathematicsthatthiscourseprovides.	
ELECTRONICS-C-3	**SEMICONDUCTOR DEVICES**	1. Learnthefundamentalphysics of thesemiconductormaterialsanddevices. 2. Identify andcharacterizethesemiconductordevices. 3. Apply thesemiconductordevices invariouscircuits.	1. Understandthebasicprinciplesandworkingofthesemiconductormaterialsanddevices. 2. Characterizethedevice. 3. Applytheknowledgeofsemiconductordevicesinreallifeapplication.
ELECTRONICS-C-IV	**APPLIEDPHYSICS**	1. Learnaboutthedevelopmentofmodernphysicsandtheoretical formationofquantum	1.Applyquantummechanicstosolvephysical systemsindifferent areasofscience.
		mechanics. 2. Learnabouttheapplicationsofquantummechanicsinsolvingphysicalproblems.	2.Knowaboutthephysical behaviourofmaterials. 3.Learnhowthescientificbehavioursofmaterialscanbeusedfor humanapplications.

		3.Learnaboutthephysicsof materialsciencebystudyin g mechanicalproperties, thermalproperties,elastica ndmagneticpropertiesof materials.	
ELECTRO NICS-C-V	**ELECTRONICSCIRC UITS**	1.Understandthevarioususe sandapplications ofdiodesandbipolar junctiontransistors. 2.Utilisethenecessaryskill neededtoanalyse electroniccircuits. 3.Comprehendthedesi gningandstudyofdiffer enttypesofamplifiers.	1. Acquire the basic knowledgeabout the use and application ofdiodeandtransistorci rcuits. 2.Designandanalyse circuitscontainingdi odesandtransistors. 3. Learnthedesigning oftransistoramplifiersa ndidentifyvarioustypes ofamplifiers. 4. Developtheknowled geaboutoscillatorsand FETs
ELECTRO NICSC-VI	**DIGITALELECTR ONICSANDVERIL OG/VHDL**	1. Understandthebinaryan dothernumbersystemsand Booleanalgebra. 2. Comprehendthedigital	1. Identifythedig itallogicdevicesa ndtheirworkingp rinciples. 2. Writehardwarelevel program

		principlesanddeviceslikelogicgates. 3. Understandthehardwareprogramminglanguagelike Verilog/VHDL.	inVerilogandVHDLfordesigningdigitalcircuits. 3.Applytheknowledgeto critically assesstheprosandconsof various hardware designmethodologies.
ELECTRONICS-C-VII	**CPROGRAMMINGANDDATASTRUCTURES**	1.Understandhighlevelprogramminglanguagethrough C/C++ programming**.** 2. Learnvarioussequentialandobjectorientedprogrammingparadigm**.**	1.WriteC/C++programsforvariousmathematicalanddataprocessingtasks 2.Applytheknowledgeofhighlevelprogramming languagetosolvingvariousscientificandreallifeproblemsusingnumerical methods 3. Critically assess theapplicability of numericalmethodsandhighlevellanguageforsolvinghumancivilization problems.
ELECTRONICS-C-VIII	**OPERATIONALAMPLIFIERSANDAPPLICATIONS**	1. Understandthefundamentals of LSIcircuitdeviceOperationalAmplifier(OP-AMP). 2.Todevelopanalyticandsynthesisskillsincircuitsusing OP-AMPS.	1. Understandworkingoftheop-amp. 2. CharacterizevariousOP-AMPICs andcircuits. 3.Applytheknowledge tousetheOP-AMPinscientificandreallifeapplications.
ELECTRONICS-C-IX	**SIGNALSANDSYSTEMS**	1.Understandthebasic mathematical	1.Identifydifferentsignaltypes andunderstandtheformalismof

		representationof electronicsignals andsystems 2. Comprehendthevari ousmathematicaltoo lsandtechniquesfora nalyzingdifferenttyp esofsignalsandsyste ms	treatingsignalsandsyst emsinmathematicaldo main. 2.Applythemathematica ltoolstorepresentsignals andanalyzetimedomaina ndFrequencydomainsig nalsandsystemslikeLTI.
ELECTRO NICS-C-X	**ELECTRONICINSTRUM ENTATION**	1. Understandthevari ousmeasurementinstr umentsandthemeasur ementtechniquesinvo lved. 2. Handledifferentin strumentslikepower supply,Oscilloscope etc. 3. Developtheknowle dgeabouttransducersa ndsensors.	1. Useandapplyva riousmeasurement instruments. 2. Measureresistance,ca pacitance,andtemperatu reusingavailablebridge methods. 3. Todesigncircuitsforsy stemslikepowersupplya ndsampleandholdcircuit setc. 4. Acquiretheoreticaland practicalknowledg eaboutvarioussens ors.
ELECTRO NICS-C-XI	**MICROPROCESSORAN DMICROCONTROLLER**	**1.** Microprocessor sandmicrocontroll er**.** **2.** Assemblylang uageprogrammin g ofmicroprocessor sandmicrocontrol ler**.**	1. Understandarchitect ureandprogramming model ofmicroprocessors808 5andmicrocontroller8 051 2. Applytheassemblyla nguageprogrammingkn owledgetobuildvariouss mall systemsbasedonmicropr ocessors8085andmicroc ontroller8051.

			3.Assestheapplicability ofmicroprocessors andmicrocontroller forsolvingvarious reallifeproblems
ELECTRONICS-C-XII	**ELECTROMAGNETICS**	1. Understandthephysicalandmathematicalprinciples ofthebehaviourofelectricityandmagnetisminmatter. 2. Comprehendthepropert ies of theelectromagneticwavea nditsinteractionwithmatte rwiththehelpofMaxwell's equations. 3. Understandtheprinciples andprocessesrelatedtopo larization,interference, anddiffractionalongwith their applicationstothedevelo pmentofwave-guideandopticalfibres.	1. Solveproblemsrelevanttointerfacesbetweenmediawithdefinedboundaryconditions. 2. UseMaxwell'sequationstodescribethebehaviourofelectromagneticwavesinvacuumaswellasmedium. 3. Describe states and methodsof polarization and analyze thepolarizationstate ofalight source
ELECTRONICS-C-XIII	**COMMUNICATION ELECTRONICS**	1. Understand the basictechniques of electroniccommunicationlike modulation. 2.Applytheknowledgetounderstandthecurrent	1.Identifythebasictechniquesofcommunicationlikecarriermodulation/demodulation. 2.Analyzethemodulationsschemesandtheirapplicability.
		generationcommunication technologies.	3.Analyzepresentgeneration systems.

ELECTRONICS-C-XIV	**PHOTONICS**	1. Understandthefundamentalofopticsand opticaldevices. 2.Identify andapplyopticalprinciples invariousapplications.	1.Identifyvarious opticaldevicesand principles 2. Characterizethe opticaldevices 3. Applytheknowledgetouseopticaldevicesinscientificandreallifeapplications 4.Criticallyanalyzetheadvantage/disadvantagesofopticalsystemsandits applicability.
ELECTRONICS-DSE-I	**POWERELECTRONICS**	1. Understandthevariousdevicesusedinpowerelectronicsanddeveloptheknowledgetodealwiththesedevices. 2. Realizeandworkwithcircuitslike,inverterandchopperalongwiththeknowledge of elctro-mechnaicalmachines.	1. Acquiretheknowledgeaboutvarioustypesofpowerdevicesandtheiruses. 2. Understandthebehaviourofthesedevicesandwillbeabletousethemwherevernecessary.
ELECTRONICS-DSE-2	**MODERNCOMMUNICATIONSYSTEMS**	1. Learn about differenttypes of new generationcommunication systemsandtechnologies. 2.Familiarizewiththeknowledgeofoptical	1.Understandthevariousthechniquesandmethodsusedinmodern day communicationsystems. 2.Understandthetechnologybehinddifferenttypesof
		communication,cellularcommunication,satellite communicationandLAN	communicationbeingusedaroundus.
ELECTRONICS-DSE-3	**NANOELECTRONICS**	1.Theworldofnanoscienceandnanotechnology.	1.Understandtheimportanceofnanoscience andnanotechnologyinourdailylives.

		2. Thevariouspreparationa ndcharacterizationtechniq ues ofnanomaterials. 3. The optical andelectronictransportprop ertiesofnanomaterialsandth eirapplications.	2. Learnaboutvariousexperi mental methodologieswithnecess arytheoreticalbackground ,whichmaybeusefulforpur suingfurtherstudies onthearеaofnanoscience a ndtechnology.
ELECTRONICS-DSE4	**TRANSMISSIONLIN ES,ANTENNAANDW AVEPROPAGATION**	1. Learn the basics ofelectromagnetic wavepropagation. 2. Learnabouttransmissionl inesandwaveguides. 3.Developtheknowledgeofr adiationofelectromagnetic wavesandtypesofantenna.	1.Understandthepropagati onofelectromagneticwave sandhowtheelectromagnet icwavecan beeffectivetransmittedthr oughtransmissionlinesorw aveguides. 2. Comprehend the radiation ofelectromagnetic waves and thetypesofantenna 3. Usemathematicalsi mulationsoftwarelikeS cilab,MATLABetcandt ousethemtocalculateva riousparametersrelatedt oelectromagneticwave propagation,transmissi onlines, waveguidesandantenna.
ELECTRONICS-SEC-1	**DESIGN ANDFABRICATION OFPRINTED**	1.Understandthe fundamentalsofprinted	1.Learnthefundamental principlesinRobotics.
	CIRCUITBOARDS	circuitboardsanditsclassificat ion. 2.Developtheknowledgeab outdesigningandfabricatio nofprintedcircuitboards.	2. Learnrobotprogramm ingandconfiguringenvir onments. 3. Understandvarious Roboticapplications.

ELECTRONICS-SEC-2	**ELECTRONICS-SEC-2**	1. Learnthefundamentalprinciplesin Robotics. 2. Learn robotprogrammingandconfiguringenvironments. 3. Understandvarious Roboticapplications.	1. Identifytheandunderstandworkingprinciplesof Robotics 2. Installandrun Robotprogramming 3. Applytheknowledgetousing Robots forreallife situations
ELECTRONICS-GE-1	**ELECTRONICCIRCUITSANDPCBDESIGNING**	1. Learn various uses andapplications of diodes andbipolarjunctiontransistors. 2. Acquirethenecessaryskilltoanalyseelectroniccircuits. 3. Learn about designingand study of small signalamplifiers. 4. Understandthefundamentalsofprintedcircuit boardsanditsclassification. 5. Develop the knowledgeaboutdesigning and	1. Acquire the basic knowledgeabout the use and application ofdiodeandtransistorcircuits. 2. Designandanalysecircuitscontainingdiodesandtransistors. 3. Learnthe designingoftransistoramplifiersandidentifyvariousty pesofamplifiers. 4. Developtheknowledgeaboutprintedcircuitboardsinelectronicapplications andwilllearnthetechniques andprocessesinvolvedinthedesignandfabricationofprintedcircuitboards.
		fabricationofprintedcircuitboards. 6.Learnetchingandsolderingprocess.	
ELECTRONICS-GE-2	**DIGITALSYSTEMDESIGN**	1. Learnaboutthedigitalprinciples likenumbersystemsandBooleanalgebra 2. Apply the digitalelectronicprinciplesincircuitanalysis and synthesis.	1. Identifyandunderstanddigitalelectronicsprinciples andsystems. 2. ApplytheknowledgetobuildsmallelectronicsystemsusingdigitalICsandtechniques.

ELECTRONICS-GE-3	**NSTRUMENTATION**	1.Learnaboutthevariousmeasurementinstrumentsandthemeasurementtechniquesinvolved. 2.Handledifferentinstruments likesignalgenerators andOscilloscope. 3.Developtheknowledgeofthestudentsabouttransducers of differenttypes. 4. Learnaboutdataacquisitionsystems. 5. Gain theoretical andpracticalknowledgeaboutvariousinstrumentsusedin	1. Acquirethenecessary knowledgetousediffe rentmeasuringinstruments for measurementsofvoltage,currentsandresistances. 2.Acquiretheknowledgeto handleanduseoscilloscope ,DSOandpulsegenerators. 3.Equipthemselveswiththetheoreticalandpracticalknowledgeaboutvariousty pesoftransducers. 4. Learn aboutthevarioussectionsof adataacquisitionsystem(DAQ)andthefunctionofDAQingeneral. 5. Learnaboutsomevery
		thefieldofbiologicalsciencesand medical science.	importantinstrumentsused inthefieldof biologicalandmedical science.
ELECTRONICS-GE-4	**COMMUNICATIONSYSTEMS**	1.Learnthe basicsofelectroniccommunicationsystemsandthesignificanceofnoiseincommunication. 2. Understandthevarioustypes of modulationschemesboththeoryandpractical. 3. Learnaboutvariousdigital modulationtechniquesand someassociatedconcepts.	1. Learnsomeofthemostfundamentaltechniquesusedincommunication. 2. Understandthevarious aspectsofacommunicationsystem. 3. Recognisethedifferentavailablemodulation techniquesalongwiththepracticalknowledgeabouttthetechnologybehindtheschemes. 4. Equipthemselveswiththeknowledgetounderstandanaloganddigitalmodulationtechniques.

		4.Studyvarioustypesofmultipleaccessingtechniques. 5.Understandcellularcommunicationand satellitecommunications.	5.Learnaboutdifferentaspectsof cellularcommunicationandsatellitecommunicationsystems.

FYUGP(NEP)			
SEMESTER	**COURSE CODE & NAME**	**COURSE OBJECTIVES**	**COURSE OUTCOMES**
I	C-1: Basic Circuit Theory and Network Analysis	The course objectives are designed to equip students with comprehensiveknowledge and practical skills in electrical circuit analysis. Students will delve into fundamental concepts such as voltage, current, resistance, capacitance, and inductance, both inDC and AC circuits. They will learn to apply Kirchhoff's laws, mesh and node analysis, and various network theorems (such as Thevenin's and Norton's) toanalyze and solve complex circuits. Practical aspects include understanding transient responses, resonance in RLC circuits, and the behavior of passive filters. The course also emphasizes phasor analysis for evaluatingAC circuit characteristics and introduces students to impedance and transmission parametersin two-port networks.	The students will able to CO1: Understand fundamental concepts of voltage, current, resistors, inductors, and capacitors in DC circuits. LO1.1: Identify and differentiate between various types of resistors and theirapplications in series and parallel circuits. LO1.2: Explain the principles of inductance and calculate energy stored in an inductor. LO1.3: Describe the principles of capacitance, types of capacitors, and their applications in electronic circuits. CO2: Apply Kirchhoff's laws and circuit analysis techniques to analyze DC circuits. LO2.1: Apply Kirchhoff's Current Law (KCL) and Voltage Law (KVL) to solve circuit problems. LO2.2: Analyze DC transient responses in RC and RL circuits using time constants. LO2.3: Analyze series RLC circuits and understand their DC response characteristics. CO3: Analyze AC circuits using phasor analysis and understand power relationships insinusoidal circuits. LO3.1: Describe sinusoidal voltage and current waveforms and calculate RMS and average values.

			LO3.2: Apply phasor analysis to solve AC circuit problems involving resistors, inductors, and capacitors. LO3.3: Analyze resonance phenomena in RLC circuits and design passive filters based on frequency response. CO4: Apply network theorems and parameters to analyze AC circuits and understand two-port network characteristics. LO4.1: Apply network theorems such as Superposition, Thevenin's, and Norton's theorems to simplify AC circuits. LO4.2: Analyze AC circuits using impedance, admittance, hybrid, and transmission parameters. LO4.3: Apply maximum power transfer theorem and understand the concept of reciprocity in AC circuit analysis.

DEPARTMENT OF MATHEMATICS

B.Sc. WITH MAJOR IN MATHEMATICS

(NON-CBCS)

COURSE CODE	COURSETITLE	OBJECTIVEAND/OREXPECTEDLEARNER OUTCOMES
MM101	**(A) CLASSICALALGEBRA** **(B) TRIGONOMETRY** **(C) VECTORCALCULUS**	Toinfusetheclassicalideasofalgebraicandanalytic structures.Thestudentscanhaveadeeperinsightofthedevelopmentsofthegeneralizednotionsof Trigonometry.Thestudentswillhaveanorientationtowardsthevectorialnotationsofmultivariable calculi.
MM201	**(A) MATRICES** **(B) ORDINARY DIFFERENTIALEQUATIONS** **(C) NUMERICAL ANALYSIS**	Studentswillbeabletousematrixmethodsforsolving linersequations,haveideasonthebasicsofdifferential equationsandalsoaboutthenumericalmethods ofobtainingresultswherecomplexityofobtaininganalyticalsolutionsissufficientlyhigh.
MM301	**(A) ANALYSIS-I(REAL ANALYSIS)**	Studentswillbeabletoidentifytheanalyticalaspectsof Mathematicalconcepts.
MM302	**(A) CO-ORDINATEGEOMETRY**	ThestudentswillbehaveadeeperunderstandingofCo-ordinate geometryandabroaderinsighttowardstheanalyticalaspectsofMathematics.
MM401	**(A) COMPUTERPROGRAMMING(C-PROGRAMMING)** **(B) COMPUTERLAB(C-PROGRAMMING,MATLAB)**	Studentswillbeabletoformulatesimpleprogrammesfornumericalevaluationofcomputationalproblems.ByComputerLaboratory,theywillbeexposedtoahandonexperienceonvarious MathematicalSoftware.

MM402	**(A) LINEARPROGRAMMING PROBLEM** **(B) ANALYSIS-II(MULTIPLE INTEGRAL)**	StudentswillbeabletodeterminetheMathematical knowhowoflinearprogrammingproblemsofOperationsResearchandalsotosolvethenusingLPPtechniques.Studentswillbeexposedtohefurtheranalytical aspectsofMathematicalconcepts.
MM501	**(A) LOGIC ANDCOMBINATORICS** **(B) ANALYSIS-III**	StudentswillbeabletoidentifythebasicsofMathematical Logicandthatofthecountingprinciples.Students willbeallowedtohaveinsightstomoregeneralized analyticalaspects.
MM502	**(A) LINEARALGEBRA** **(B) NUMBERTHEORY**	StudentswillbeabletousealgebraicstructuresforexplaininggeometricconceptsStudentswill beexposedtothe fundamentalsofNumbersandtheirproperties.
MM503	**(A)FLUID MECHANICS**	StudentswillbeintroducedtothefundamentalconceptsofFluid MechanicsanditsvariousapplicationsinPhysicalSciences.
MM504	**(A) MECHANICS** **(B) INTEGRALTRANSFORMATION**	StudentswillbeintroducedtotheMathematical backgroundofMechanicsandthecorrespondingproblem-solvingtechniques.
MM601	**(A) METRICSPACE** **(B) STATISTICS**	StudentswillbeexposedtotheTopologicalStructuresandthe generalizationconceptsarisingoutofRealAnalysis.
MM602	**(A) DISCRETE MATHEMATICS** **(B) GRAPHTHEORY**	Thestudentswillbeabletoidentify therelationsbetweenMathematicsandTheoreticalComputerScience.Studentswillbeintroducedtothefundamentalsof GraphTheoryanddifferent representationsofaGraphforpracticalapplications.
MM603	**(A) ALGEBRAII** **(B) PARTIALDIFFERENTIAL EQUATIONS**	StudentswillbeabletoidentifythecharacteristicsofAbstractAlgebraicStructuresandalsocanhaveideas onthebasicsofpartialdifferentialequations.
MM604	**GROUP(A)** **(A) FINANCIAL MATHEMATICS** **(B) OPERATIONS RESEARCH**	StudentswillbeintroducedtotheapplicationofMathematicalprinciplestotheproblemsofFinancial MathematicsandOperations Research.

	GROUP(B)	StudentswillbeintroducedtotheapplicationofMathematical
	(A) SPACEDYNAMICS **(B) RELATIVITY**	principlestotheproblemsofSpaceDynamicsandRelativity.

B.SC.NONMAJOR

SL NO.	SUBJECT	COURSE CODE	COURSETITLE	OBJECTIVEAND/OREXPECTEDLEARNER OUTCOMES
1.	Mathematics [Non-Major (NM)]	**NM101**	**(D)CLASSICAL ALGEBRA** **(E)TRIGONOMETRY** **(F)VECTOR CALCULUS**	Toinfusetheclassicalideasofalgebraicandanalytic structures. Thestudentscanhaveadeeperinsightofthedevelopmentsofthegeneralizednotionsof Trigonometry. Thestudentswillhaveanorientationtowardsthevectorial notationsofmultivariablecalculi.
		NM201	**(D)MATRICES** **(E)ORDINARY DIFFERENTIAL EQUATIONS** **(F)NUMERICAL ANALYSIS**	Studentswillbeabletousematrixmethodsforsolving linersequations,haveideasonthebasicsof differential equationsandalsoaboutthenumericalmethodsof obtainingresultswherecomplexityofobtininganalytical solutionsissufficientlyhigh.
		NM301	**(B)CO-ORDINATE GEOMETRY** **(C)ANALYSIS-I(REAL ANALYSIS)**	ThestudentswillbehaveadeeperunderstandingofCo- ordinategeometryandabroader insighttowardsthe analyticalaspectsofMathematics.

		NM401	**(C)LINEAR PROGRAMMING PROBLEM (D)COMPUTERLAB (MATLAB, MATHEMATICA)**	Thestudentswillbeabletoformulateandsolvevarious practicalmodelsusingLinearProgrammingtechniquesand alsobyusingComputerLaboratorytheywillattain computationalproficiencyindealingwith Mathematical Software.
		NM501	**ANALYSIS-II(COMPLEX**	Thestudentswillbeabletounderstandtheanalytical
			ANALYSIS)	perspectiveofthecomplexnumbersystem.Thestudents willbeabletoidentifytheapplicabledomainof MathematicsinPhysicalSciences.
		NM601	**GROUP(A) (C)ABSTRACT ALGEBRA (D)ELEMENTARY STATISTICS**	Studentswillbeabletoidentifythecharacteristicsof AbstractAlgebraicStructuresandalsocanobtaininsights ofstatisticaltoolsforsolvingvariouspracticalproblems.
			GROUP(B) (A)DISCRETE MATHEMATICS (B)METRICSPACE	Thestudentswillbeabletoidentifytherelationsbetween MathematicsandTheoreticalComputerScienceandalso haveadetailedideaonMetricSpacesasapreludetothe Topologicalconcepts.

FYUGP(NEP)			
SEMESTER	**COURSE CODE & NAME**	**COURSE OBJECTIVES**	**COURSE OUTCOMES**
I	MTHC1: Calculus andClassical	The course will introduce to the learners the	After completing the course a learner will be able to CO1: Apply De'Moivre theorem to different

	Algebra	concept of De Moivre's Theorem and its application in the expansion of some trigonometric functions. Students will learn the techniques of successive differentiation, Leibnitz theorem, and L'Hospital rule for evaluation of limit. It will explain various types of reduction formula for integration of trigonometric function and applications in finding the volume and surface area of revolution of curve. The course will also introduce the system of linear equation and how to solve such systems.	problems. ILO 1.1: Demonstrate the use of De'Moivre's theorem in raising complex numbers to powersand extracting roots. ILO 1.2: Solve problems involving the trigonometric form of complex numbers usingDe'Moivre's theorem. CO2: Discuss expansion of trigonometric and hyperbolic functions. ILO 2.1: Derive the series expansions for sine, cosine, and hyperbolic sine, and cosine functions. ILO 2.2: Analyze the convergence of trigonometric and hyperbolic function expansions. CO3: Apply Leibniz theorem to obtain successive differentiation. ILO 3.1: Utilize Leibniz's theorem to find higher-order derivatives of product functions. ILO 3.2: Solve problems involving successive differentiation using Leibniz's rule. CO4: Utilize L'Hospital rule in finding limit of quotient of functions. ILO 4.1: Apply L'Hospital's rule to evaluate limits of indeterminate forms such as 0/0 and∞/∞. ILO 4.2: Analyze and solve problems involving limits where L'Hospital's rule is applicable. CO5: Evaluate maxima and minima of functions. ILO 5.1: Determine the critical points of a function and classify them as maxima, minima, orsaddle points. ILO 5.2: Apply the first and second derivative tests to find and verify local maxima andminima of functions. CO6: Describe reduction formula involving both trigonometric and logarithmic functions ILO 6.1: Develop reduction formulas for integrals involving trigonometric functions. ILO 6.2: Apply reduction formulas to solve integrals involving logarithmic functions. CO7: Evaluate length of curves and area &volume of revolution of curves. ILO 7.1: Calculate the arc length of a given curve

			using integral formulas. ILO 7.2: Evaluate the area and volume generated by rotating a curve around an axis usingintegral methods. CO8: State well ordering property of positive integers and fundamental theorem of Algebra. ILO 8.1: Explain the well-ordering property of positive integers and its implications. ILO 8.2: State and apply the fundamental theorem of algebra in solving polynomial equations. CO9: Apply Division and Euclidean Algorithm to find GCD. ILO 9.1: Use the Division Algorithm to express the gcd of two integers as a linear combination. ILO 9.2: Implement the Euclidean Algorithm to determine the greatest common divisor oftwo integers. CO10: Describe congruence relation between integers. ILO 10.1: Explain the concept of congruence relations and their properties. ILO 10.2: Solve problems involving modular arithmetic using congruence relations. CO11: Demonstrate row reduction and echelon form of matrix. ILO 11.1: Perform row operations to transform a matrix into row echelon form. ILO 11.2: Demonstrate the process of reducing a matrix to its reduced row echelon form. CO12: Solve system of linear equations. ILO 12.1: Apply matrix methods, such as Gaussian elimination, to solve systems of linearequations. ILO 12.2: Utilize the inverse matrix method and Cramer's rule to find solutions to systems oflinear equations.

DEPARTMENT OF ZOOLGY

B.Sc. WITH MAJOR IN ZOOLOGY

The main objective of the course is to provide in-depth knowledge about biodiversity, theirdevelopmentandinteraction with environment. Thestudy of Physiology,Endocrinology,Cell Biology and Molecular Biology has been included to provide in-depth knowledge of thesubject courses on instrumentation and techniques including Biostatistics, Biotechnology andBioinformatics are included to provide the students with recent development in the field ofbiology.

Course Objective

Subject: Zoology Honours (CBCS)

SL NO:	Subject	Course Code	CourseTitle	CourseOutcome
01	ZOOLOGY	ZC101T	NON-CHORDATESI:PROTISTS TOPSEUDOCOELOMATES	The objective of the courseis to expose the students tovarious forms of protozoaand worms; theirclassification and structuralanatomy
02		ZC102T	PRINCIPLES OFECOLOGY	The objective of the courseis to familiarize the studentswithfundamentalsof ecology and impacts ofecological factors on livingorganisms.
03		ZC203T	NON-CHORDATES II:COELOMATES	Theobjectiveofthecourseis to expose the students tovariousformsofcoelomates ,their classification andstructuralanatomy.
04		ZC204T	CELLBIOLOGY	The objective of the courseis to expose the students tostructure and function of acellasthefundamentalunito flife.
05		ZC305T	DIVERSITY OFCHORDATA	The objective of the courseistoexposethestudent sto variousformsofchordates,

				theirclassificationands tructuralanatomy.
06		ZC306T	ANIMALPHYSIOLOGY:CONTROLLING ANDCOORDINATINGSYSTEMS	The objective of this courseisto provideafoundationforunderstandingthecomplexities of thecoordination system ofanimalbody.
07		ZC307T	FUNDAMENTALS OFBIOCHEMISTRY	The objective of this courseis to expose the students tobiomolecules of livingorganisms,theirinteractionsforperpetuationoflife.
08		ZC408T	COMPARATIVE ANATOMY OFVERTEBRATES	The objective of this courseis to provide the idea aboutthedifferentanatomical differences of organs likeCirculatory, Urinogenital,Respiratory systems ofdifferentgroupsoforganisms.
09		ZC409T	ANIMALPHYSIOLOGY: LIFESUSTAININGSYSTEMS	The objective of this courseis to provide knowledgeaboutthevariousorgansandtheir physiology includingDigestion,Respiration,Circulation,Renalphysiologyetc.
10		ZC410T	BIOCHEMISTRY OFMETABOLICPROCESSES	The objective of this courseistogivebasicideaabouttheoverviewofmetabolismincluding Carbohydrate,Protein and Lipidmetabolism
11		ZC511T	MOLECULAR BIOLOGY	The objective of this courseisto provideideaaboutGeneticmakeup likeDNA,RNAandthemechanisms likeDNAreplication,

				Transcription,Translation, Gene Regulationetc.
12		ZC512T	PRINCIPLES OFGENETICS	The objective of this courseis to provide the idea aboutbasic genetics LikeMendelian Genetics andLinkage,Crossingover,and Transposable Elements andAdvanced geneticslikeRecombination.
13		ZC613T	DEVELOPMENTAL BIOLOGY	The objective of the courseistogiveideaaboutthe developmental strategies ofdevelopmental process ofdifferentorganismsinclud inghuman beings
14		ZC614T	EVOLUTIONARY BIOLOGY	The objective of the courseis to provide idea about theevolution process ofdifferentspeciesandtheori gin of species andevolutionofman
DISCIPLINECENTRICELECTIVECOURSES				
01	ZOOLOGY	DSEIII	ENDOCRINOLOGY	Theobjectiveincludesintrod uction toEndocrinology,thesystem sofEndocrinesystemetc.
		DSEIV	BIOLOGYOFINSECTA	The objective of this courseincludes the study of InsectTaxonomy,GeneralMo rphology and Physiologyof insects and role of insectsetc.
		DSEVII	FISHANDFISHERIES	The objective of this courseistoawarethestudents aboutthefishesandthe

				management strategies offisheries
		DSEVIII	IMMUNOLOGY	The objective of this courseis to proved idea about thebasics of Immunology andthe practical implications ofimmunology.

FYUGP(NEP)			
SEMESTER	**COURSE CODE & NAME**	**COURSE OBJECTIVES**	**COURSE OUTCOMES**
I	ZOO-C-01:Animal Diversity I	COs: 1) Describe different phyla in animal kingdom 2) Organize the organisms in different categories based on morphological characteristics 3) Analyze the interrelationship among different species and genera within each group of animals	Learning Outcomes: 1) Understand the various phyla in Animal Kingdom 2) Compare various organisms based on morphology 3) Classify different groups of animals