MAA SHAKUMBHARI UNIVERSITYSAHARANPUR

GRADUATE

AsperNationalEducationPolicy-2020

SUBJECT:
GEOGRAPHYSYLLABUSF
OR:B.A./B.Sc.
(Session 2024-25 onwards)

B.A./B.Sc. in Geography

PROGRAMMESPECIFICOUTCOMES (PSOs)-

Program Outcome (After3 Years of Study)

a) ThiscourseprovidesthebasicideasandconceptsofPhysical&HumanaspectsofGeography.

b) ThiscourseintendstoorientthelearnerwiththeApproachestothebroaderdisciplineof Geography

c) Itwillhelpindevelopinganalyticalandcriticalthinkingbasedonthethemesandissuesof geography.

d) Iteventuallypreparesthestudentstounderstandthedevelopmentofthesubjectanddevelop aroundissues suited to theneeds of thecontemporaryworld.

e) ItwillhelpinexhaustiveunderstandingofthebasicconceptsofGeographyandanawarenesso f theemergingareas of thefield.

f) Acquisitionofin-depthunderstandingoftheappliedaspectsofGeographyaswellasinterdisciplinarysubjectsi n everydaylife.

g) Improvementofcriticalthinkingandskillsfacilitating.

h) Theapplicationof knowledge gained inthefieldof Geographyinthe classroomto thepracticalsolvingof societal problems.

i) Theprogrammeorientsstudentswithtraditiongeographicalknowledgealongwithadvancec ontemporaryskills like remotesensingand GIS.

MAASHAKUMBHARIUNIVERSITYSAHARANPUR

Semester-wiseTitlesofthePapersin BA(Geography)

Year	Sem.	Course Code	NEPCode	PaperTitle	Theory/ Practical	Credits
1st YearCertificate						
I	I	0111101	A110101T	PhysicalGeography	Theory	4
I	I	0111180	A110102P	ElementsofMapandSurveying	Practical	2
I	II	0211101	A110201T	HumanGeography	Theory	4
I	II	0211180	A110202P	ThematicMappingand Surveying	Practical	2
2nd YearDiploma						
2	III	0311101	A110301T	Environment DisasterManagementand ClimateChange	Theory	4
2	III	0311180	A110302P	StatisticalTechniquesand Surveying	Practical	2
2	IV	0411101	A110401T	EconomicGeography	Theory	4
2	IV	0411180	A110402P	WeatherMaps,Geological Mapsand Surveying	Practical	2
3rd YearDegree						
3	V	0511101	A110501T	RegionalGeography	Theory	4
3	V	0511102	A110502P	BasicsofRemoteSensingandGIS	Theory	4
3	V	0511160	A110503R	Tour/ Field report	Practical	2
3	V	0511165	A110504R	ProjectReport-1	Practical	4
3	VI	0611101	A110601T	GeographyofIndia	Theory	4
3	VI	0611102	A110602T	EvolutionofGeographical Thoughts	Theory	4
3	VI	0611180	A110603P	RemoteSensingandGIS	Practical	2
3	VI	0611165	A110604R	ProjectReport-2	Practical	4

BA 1st Year, Certificate
CourseSemester-I
Course
I(Theory)

ProgrammeClass: Certificate/BA	**Year:First**	**Semester:First**
Subject:Geography		
CourseCode:0111101	CourseTitle:**PhysicalGeography**	

Courseoutcomes:Studentswillbeabletounderstand

- TheEarthgeomorphictransition frombeginningtopresentDay
- Platetectonicsandrelatedmovements
- Landformscarvedbyvariousagents oferosion
- Earth'sclimateandthose factorsthatinfluenceit
- Oceanssystemand biogeographyof theworld.

Credits:4	CoreCompulsory
Max.Marks: 25+75	Min.PassingMarks: 40
TotalNo.of Lectures-Tutorials-Practical(inhoursperweek):L-4/w	

Unit	**Topics**	**No. ofLectures**
I	NatureandScopeofPhysicalGeography,OriginofEarth(BigBangTheoryandIndian Concepts).InterioroftheEarth,Rocks	8
II	OriginofContinentsandOceans,Isostasy,EarthquakesandVolcanoes,ContinentalDrifttheory,ConceptofPlateTectonics	8
III	Folding,Faulting,Denudation,CycleofErosionbyDavisandPenck.	8
IV	Fluvial,Karst,AeolianandGlacial Landforms	8
V	Composition and Structure of atmosphere, Insolation,Atmosphericpressureand winds.	8
VI	Airmasses,cyclonesandanti-cyclones,Humidity,condensationsprecipitationand rainfalltypes.	7
VII	OceanBottoms,Oceandeposits,salinity.CirculationofOceanwater-Waves,CurrentsandTides,Coral reefsandit'stype.	7
VIII	Biosphere:MeaningandConcept,componentsOfBiosphere	6

SuggestedReadings:

1. Singh,Savindra(2018). PhysicalGeography(Eng./Hindi)Allahabad,PrayagPustak.
2. Haggett,R.J.(2007): *FundamentalsofGeomorphology,NewYork,U.S.A.Routledge.*
3. *Khullar,*D.R.(2012).PhysicalGeography.NewDelhi, India:KalyaniPublishers.
4. Strahler,A.H.andStrahler,AN.(2001):ModernPhysicalGeography(4/E).NewYork, U.S.A.: John Wileyand Sons,Inc.
5. Thornbury,W.D.(2004):PrinciplesofGeomorphologyNewYork,U.S.A. Wiley.
6. AlkaGautam:BhautikBhugol.RastogiPublications,Meerut.
7. Bansal,S.C.,PankajChauhan:(2019)BhautikBhugol,MeenakshiPrakashan,Meerut.

Thiscoursecan beoptedas an electivebythe students of followingsubjects:Open forall

SuggestedContinuousEvaluationMethods:
Assignment/Test /Quiz(MCQ)/Seminar/ Presentations

Suggested equivalent online courses:https://onlinecourses.swayam2.ac.in/cec21hs03/ previewhttps://onlinecourses.swayam2.ac.in/nos20sc25/ preview

BA 1st Year

Semester-ICourse II(Practical)

Programme/Class: Certificate/BA	**Year:First**	**Semester:First**
Subject:Geography		
CourseCode:0111180	CourseTitle: **Elementsof MapandSurveying**	
CourseLearningOutcomes Oncompletionofthiscourse,learnerswillbeableto: • Understandthebasicideaof Map, ScaleandTopographicsheets		
Credits:2	CoreCompulsory	
Max.Marks: 100	Min.PassingMarks: 40	
TotalNo.of Lectures-Tutorials-Practical(inhoursperweek):P-2/w		

Unit	**Topics**	**No. ofLectures**
I	Cartography:-Natureand Scope. Scales-Conceptandapplication;GraphicalConstructionofPlain,Comparative,Diagonaland Vernierscales	7
II	MapProjections:-Classification,PropertiesandUses;GraphicalConstruction of Polar Zenithal, Cylindrical Equal Area, Bonne'sandMercator's Projections,	7
III	Topographical Map:- Coverage, Scale and Topo Symbol,InterpretationSurveyof IndiaToposheets.Representationoflandforms byContours.	8
IV	Basics of Surveying:-Surveying: meaning, Plane TableSurveyingByIntersectionandresection(onlyonemethod).	8

Note: - No Internal Exam in Practical

Suggested Readings:

1. Monkhouse,F.J.andWilkinson,F.J.(1985):MapsandDiagrams.Methuen,London
2. Raisz,E.(1962):GeneralCartography.JohnWileyandSons,NewYork.5thedition.
3. Sarkar,A.K.(1997):PracticalGeography:ASystematicApproach.OrientLongman,Kolkata.
4. Sharma,J.P.(2001):PrayogikBhugol.,RastogiPublication,Meerut3rd.edition.

5. Singh,R.L.andSingh,RanaP.B.(1993):ElementsofPracticalGeography.(HindiandEnglish editions). Kalyani Publishers, New Delhi. 6. Singh,L.R.(2006):FundamentalsofPracticalGeography,ShardaPustakBhawan.Allahabad.
Thiscoursecan beoptedas an electivebythe students of followingsubjects:Open forall
Note: InFinalExaminationStudentshallbeexaminedbyexternalandinternalexaminers.Marks Distribution: Written Exam. Viva. Practical File, Map Preparation, Topo sheetinterpretation.
FiveQuestionsaretobeattemptedWrittenTest– 60 **Viva-voice–20** **Record–Work(file)–20**

BA1stYear
Semester-
IICourse
I(Theory)

ProgrammeClass: Certificate/BA	**Year:First**	**Semester:Second**
Subject:Geography		
CourseCode:0211101	CourseTitle:**HumanGeography**	

CourseLearningOutcomes:
Oncompletionofthiscourse,learnerswillbeableto:

- TounderstandtheConcept,Nature.MeaningandScopeofHumanGeography.
- TounderstandthenaturalandCulturalChangesinandaroundtheHumanEnvironsandtheirinterrelationship

Credits:4	CoreCompulsory
Max.Marks:-25+75	Min.PassingMarks: 40

TotalNo.of Lectures-Tutorials-Practical(inhoursperweek):L-4/w

Unit	**Topics**	**No. ofLectures**
I	ConceptandNature,MeaningandScopeof HumanGeography.	7
II	ManandEnvironmentrelationship-Determinism,Possibilism,andNeo-determinism	7
III	Population- Distribution and pattern, global migration - causesandconsequences,conceptofover-populationandunder-population.	7
IV	HumanSettlements:Origin,typesandpattern(RuralUrban)characteristics, House types and their distribution with specialreferencetoIndia.	7
V	PrimitiveEconomies-Foodgathering,Hunting,Pastoralherding,Fishing, LumberingandPrimitiveagriculture, Agriculturetypes	8
VI	CulturalRegions,Race, Religioninreferenceto India	8
VII	WorldTribes:Eskimos,Khirghiz,Bushmen,Pygmies.	8
VIII	Indian Tribes:Tharus,Bhil,Santhal,Nagas.	8

SuggestedReadings:

1. Chisholm,M.(1985):HumanGeography,2nd edition,PenguinBooks, London.
2. BNSingh(2019)ManavBhugolkaSwaroop,PravalikaPublication,Allahabad.
3. Hussain,M.(1994):HumanGeography,RawatPublications,Jaipur.
4. BNSingh (2021)ManavevamArthikBhugol,PravalikaPublication,Allahabad
5. Kaushik,S.D.andSharma,A.K.(1996):PrinciplesofHumanGeography(inHindi),Rastogi publication, Meerut.
6. Norton,W. (2008): Human Geography, OxfordUniversityPress, New York 5thed.
7. Singh,L.R.(2005):FundamentalsofHumanGeography,ShardaPustakBhawan,Allahabad .
8. Smith,D.M.(1977):HumanGeography-AWelfareApproach,EdwardArnold(publishers) Ltd.,London
9. Stoddard,R.H.,Wishart,D.j.andBlouet,B.W.(1986):HumanGeography.Prentice-Hall,Englewood Cliffs, New Jersey.
10. Johnston,R.J.,Gregory,D., Pratt,G. andWatts,M.(2009): TheDictionaryof HumanGeography.5thedition,basilBlackwell Publishers, Oxford.
11. S.C.Bansal.,(2018)Manav Bhugol,4th editionMeanakshi Prakashan,Meerut.
12. Dr.ChaturbhujMamoria, ManavBhugol,Sahitya Publication

Thiscoursecan beoptedas an electivebythe students of followingsubjects:Openforall

SuggestedContinuousEvaluationMethods:
Assignment/Test /Quiz(MCQ)/Seminar/ Presentations

Suggestedequivalentonlinecourses:
Courses on Swayam /
MOOCshttps://onlinecourses.swayam2.ac.in/nou20hs18/
preview

BA 1st Year
Semester-II
Course
II(Practical)

Program/Class: Certificate/BA	**Year:First**	**Semester:Second**
Subject:Geography		
CourseCode:0211180	CourseTitle:**ThematicMapping andSurveying**	

CourseLearningOutcomes
Oncompletionofthiscourse,learnerswillbeableto:

- Understandthebasicideaof Map.ScaleandTopographicsheets

Credits:2	CoreCompulsory
Max.Marks: 100	Min.PassingMarks: 40

TotalNo.of Lectures-Tutorials-Practical(inhoursperweek):P-2/w

Unit	**Topics**	**No. ofLectures**
I	Maps- Classification and Types, Diagrammatic DataPresentation –Line, Bar and Circle.	7
II	ThematicMappingTechniques– Properties,UsesandLimitations:Choropleth,Dot–Isopleths,Map Techniques	7
III	Cartographic Overlays – Point, Line, thematic Maps-PreparationandInterpretation.	8
IV	Instrumental Survey : Prismatic Compass–IntersectionMethod	8

Note:- No Internal Exam in Practical
SuggestedReadings:

1. Monkhouse,F.J.andWilkinson,F.J.(1985):MapsandDiagrams.Methuen,London
2. Raisz,E.(1962):GeneralCartography.JohnWileyandSons,NewYork.5thedition.
3. Singh,R.L.andSingh,RanaP.B.(1993): Elementsof PracticalGeography.(Hindiand English editions).Kalyani Publishers,NewDelhi.
4. Singh,L.R.(2006):FundamentalsofPracticalGeography,ShardaPustakBhawan,Allahabad.
5. Sharma,J.P.(2016):PrayogatmakBhugolKiRooprekha,RastogiPublication,Meerut

Note: In Final Examination Students shall be examined by external and internal examiners. Marks Distribution: Written Exam (60). Viva (20). Practical File, Map Preparation. (20)

MAASHAKUMBHARIUNIVERSITYSAHARANPUR

Semester-wiseTitlesofthePapersinBA (Geography)

Year	Sem.	Course Code	NEPCode	PaperTitle	Theory/ Practical	Credits
2nd YearDiploma						
2	III	0311101	A110301T	Environment DisasterManagementand ClimateChange	Theory	4
2	III	0311180	A110302P	StatisticalTechniquesand Surveying	Practical	2
2	IV	0411101	A110401T	EconomicGeography	Theory	4
2	IV	0411180	A110402P	WeatherMaps,Geological Mapsand Surveying	Practical	2

BA 2nd Year,Semester-IIICourse I(Theory)

Programme/Class: Diploma/BA	Year:Second	Semester:Third
Subject: Geography		
CourseCode:0311101	Course Title: **Environment, Disaster Management andClimateChange**	

CourseLearningOutcomes: Students willbeabletounderstand

- Thecourseaimistogivebasicunderstandingofconcept Environment,ClimateChange and Disaster Management.
- Understandingoftheconceptofappraisalandconservationof EnvironmentandNatural Resources.
- ItwillhelpindevelopingunderstandingaboutvariousImpactsofClimateChange.
- Thiscourseshallintroducethebasic conceptsrelated todisasterManagement.
- ThispapershallhelpinunderstandingGlobaleffortinfieldofdisastermanagement.

Credits:4	CoreCompulsory
Max.Marks:-25+75	Min.PassingMarks: 40

TotalNo.of Lectures-Tutorials-Practical(inhoursperweek):L-4/w

Unit	Topics	No.of Lectures
I	Concepts&componentsofEnvironment,Ecologyandecosystem.	8
II	Bio-diversityanditsconservation,sustainabledevelopment.	8
III	Deforestation,soilerosion,soilexhaustion,Desertification,Airpollution, waterpollution Disposalofsolid waste.	8
IV	GangaActionPlan,Tigerproject,Tehridam&NarmadaValleyproject.	8
V	ScienceofClimateChange:UnderstandingClimateChange;GreenHouseGases andGlobal Warming.	8

VI	Global Climatic Assessment - IPCC. Impacts of ClimateChange, NationalActionPlanonClimateChange.	7
VII	Disasters, Hazards, Risk, Vulnerability, Types of Disasters-Naturaland Man-made	7
VIII	ChemicalandNuclearDisasters.Do'sandDon'tsDuring Disasters.Covid -19Disaster	6

SuggestedReadings:

1. Singh,R.B.(1993)EnvironmentalGeography. Delhi, India:HeritagePublishers.
2. UNEP.(2007).GlobalEnvironmentOutlook:GEO4:EnvironmentForDevelopment, United Nations Environment Programme. UK: University Press,Cambridge.
3. GovernmentofIndia.(2011).DisasterManagementinIndia.Delhi,India:Ministryon HomeAffairs.
4. Singh,Savendra(2019)Pryavaran Bhugol,PravalikaPublication,Allahabad.
5. Kapur, A. (2010). Vulnerable India: A Geographical Study of Disasters. Delhi,India.SagePublication.
6. Singh,Savendra(2019)ApadaPrabandhan,PravalikaPublication,Allahabad.
7. Ramkumar, M. (2009). Geological Hazards: Causes, Consequences and MethodsofContainment. NewDelhi,India:NewIndiaPublishingAgency.
8. Climate Change: Understanding Climate Change; Green House Gases and GlobalWarming;Global Climatic Assessment-IPCC
9. ClimateChangeandVulnerability:PhysicalVulnerability;EconomicVulnerability,Social Vulnerability.
10. Government of India. (2008). Vulnerability Atlas of India. New Delhi, India:BuildingMaterials&TechnologyPromotionCouncil,MinistryofUrbanDevelopment,Government ofIndia
11. Modh,S.(2010).ManagingNaturalDisaster:Hydrological,MarineandGeologicalDisasters.Delhi,India: Macmillan.
12. BansalSC,(2019)Prayavarnekadhyan,MeenakshiPublication,Meerut.
13. AlkaGautam,Prayavarn Bhugol,ShardaPustak Bhawan,Allahabad
14. Ganesh Pathak (2022): Prayavaran Apda Prabandhan, Jalvayu Parivartan: RajeshPublications,Delhi.

Thiscoursecan beoptedas an electivebythe students of followingsubjects:Open forall
SuggestedContinuousEvaluationMethods: Assignment/Test /Quiz(MCQ)/Seminar/ Presentations
Suggestedequivalentonlinecourses: https://onlinecourses.swayam2.ac.in/aic19_ge05/preivewhttps://onlinecourses.swayam2.ac.in/nou21_bt03/preview

BA 2nd
Year,Semester III
Course
II(Practical)

Programme/Class: Diploma/BA	Year:second	Semester:Third
Subject:Geography		
CourseCode:0311180	CourseTitle:**StatisticalTechniquesandSurveying**	

CourseOutcomes: Studentswill be ableto understand

- Todifferentiatebetween qualitativeandquantitativeinformation.
- Tounderstandthenatureofvarious data.
- Tounderstandsamplingmethods fordatacollection.
- Topresentdatathrough graphicalanddiagrammaticformats.
- To usetheconcept of probabilitymainlythenormal distribution.

Credits:2	CoreCompulsory
Max.Marks: 100	Min.PassingMarks: 40

TotalNo.of Lectures-Tutorials-Practical(inhoursperweek):P-2/w

Unit	Topics	No. of Lectures
I	UseofdatainGeography:SignificanceofStatisticalMethodsinGeography;SourcesofData,TypesofData	8
II	TabulationandDescriptiveStatistics:FrequencyDistributionTableandTabulation,GraphicalPresentationofData(Bardiagram,Histograms,FrequencyandCumulativeFrequency Curves),Measurement of Central Tendencies (Mean, Median andMode),Dispersion, Standard deviation.	8
III	MethodofSampling, Correlation(RankCorrelation).	7
IV	ApplicationofStaticalmethodsinSocio-economic Survey.	7

Note:- No Internal Exam in Practical

SuggestedReadings:

1. BerryB.J.L. andMarble D.F.(eds.):SpatialAnalysis–AReaderinGeography.
2. EbodonD.,1977:StatisticsinGeography:APracticalApproach.
3. Davis, R.E. and Foote, F.S. (1953): Surveying, 4th edition, McGraw Hill Publication,NewYork

4. Sharma,J.P.(2001):Prayogatmak Bhugol,RastogiPublication,Meerut
5. HammondP.andMcCullaghP.S.,1978:QuantitativeTechniquesinGeography:AnIntroduction,Oxford UniversityPress.
6. Sharma,PM,(2009)BhugolMesankhkiyaVidhyan,RajasthanGranthAcademy,Jaipur
7. BansalSC,(2020)ShodhvidhitantravasankhikiyaVisgyan,R.K.BooksPublication,NewDelhi.
8. KingL.S.,1969:StatisticalAnalysisinGeography,Prentice-Hall.
9. MahmoodA.,1977:StaticalsMethods inGeographicalstudies,Concepts.
10. PalS.K.,1998: Statistics forGeoscientists, Tata McGraw Hill, NewDelhi.
11. Sarkar,A.(2013)Quantitativegeography:techniquesandpresentations.OrientBlackSwan PrivateLtd.,NewDelhi
12. SilkJ.,1979:StatisticalConceptsinGeography,AllenandUnwin,London.
13. SpiegelM.R.:Statistics,Schaum'sOutlineSeries.
14. YeatsM.,1974:AnIntroductiontoQuantativeAnalysisinHumanGeography,McGraw Hill, New York.

Note: InFinalExaminationStudentshallbeexaminedbyexternalandinternalexaminers.Marks Distribution:Written Exam (60). Viva (10). Practical File (10), Instrumental Surveys (20).

BA 2nd YearSemester-IVCourse I(Theory)

Program/Class: Diploma/BA	Year:Second	Semester:Fourth
Subject:Geography		
CourseCode:0411101	CourseTitle:**Economic Geography**	

CourseLearningOutcomes

Oncompletionofthis course,learnerswill beableto:

- DefineMeaning,ConceptsandapproachesofEconomicGeography
- UnderstandthenatureofEconomicactivities,ResourceDistribution
- UnderstandtheEffectsofglobalizationondevelopingcountries.

Credits:4	CoreCompulsory
Max.Marks:-25+75	Min.PassingMarks: 40

TotalNo.of Lectures-Tutorials-Practical(inhoursperweek): L-4/w

Unit	Topics	No.of Lectures
I	Meaning,conceptsandapproachesofEconomicGeography:Spatialorganization ofeconomicactivities	8
II	Resources:meaning, concepts,classificationanddistribution	8
III	Spatio-Economic organization of Forestry, fishing andminingactivities	7
IV	Agriculturaltypologies,agriculturallandusemodel(VonThunen)	7
V	Typesof industries;Factorsof locationofindustries;iron andsteelindustry, cotton textiles andsugar.	8
VI	Worldtransportation:Searoutesandmajortranscontinentalrailways.	8
VII	WTOASEAN,andInternationaltrade:Patternsandtrends	7
VIII	Effectof globalizationondevelopingcountries.	7

SuggestedReadings:

1. BNSingh (2021)Manavevam ArthikBhugol,PravalikaPublication,Allahabad
2. Bryson, J., Henry, N., Keeble, D. and Martin,R. (eds.) (1999) : The EconomicGeography Reader: Production and Consuming Global Capitalism. John Wiley andSons,Inc, New York.
3. Clark,G.L.,Gertler,M.S.andFeldman,M.P.(eds.) (2000):The OxfordHandbookofEconomicGeography. Oxford UniversityPress, USA.
4. Coe,N.(2007):EconomicGeography:aContemporaryIntroduction.BlackwellPublishers Inc., Massachusetts.
5. Gautam,A.(2006):AarthikBhugolkeMoolTattava,Sharda PustakBhawan,Allahabad.
6. Guha,J.S.andChattoraj,P.R.(2002):ANewApproachtoEconomicGeography:AStudyof Resources. TheWorld PressPrivateLimited, Kolkata.
7. Hanink,D.M.(1997):PrinciplesandApplicationsofEconomicGeography:Economy,Poli cy, Environment.JohnWileyandSons,Inc, New York.
8. Hartshorne,T.A.andAlexander,J.W.(1988):EconomicGeography(3rd revisededition)En glewood Cliff, New Jersey, Prentice Hall
9. Hudson,R.(2005):EconomicGeographies:Circuits,FlowsandSpaces.SagePublications, London.
10. Knowles,R,Wareing,J.(2000):EconomicandSocialGeographyMadeSimple,Rupaand Company,New Delhi.
11. Sokal,Martin2011.EconomicGeographic'sofGlobalisation:ashortIntroduction.Chelten ham,UK : Edward Elgar.
12. Alexander,J.W.(1988):EconomicGeography.Prentice-Hall,NewDelhi,
13. H.M.Saxena(2021):EconomicGeography,RajasthanGranthAcademy,Jaipur.

SuggestedContinuousEvaluationMethods:
Assignment/Test /Quiz(MCQ)/Seminar/ Presentations

Suggested equivalent online courses:https://onlinecourses.nptel.ac.in/noc21hs50/preview

BA 2nd YearSemester-IVCourseII

(Practical)

Program/Class: Diploma/BA	Year:second	Semester:Fourth
Subject:Geography		
CourseCode:0411180	CourseTitle: **WeatherMaps,GeologicalMapsand AdvancedSurveying**	

CourseLearningOutcomes

OnCompletionof thiscourse, learnerswillbe ableto:

- IdentifythevariousSurveyOperationsandSurveyInstruments
- TounderstandtheideaofBasic andappliedInstrumentalsurveying

Credits:2	CoreCompulsory
Max.Marks: 100	Min.PassingMarks: 40

TotalNo.of Lectures-Tutorials-Practical(inhoursperweek):P-2/w

Unit	Topics	No. of Lectures
I	WeatherMaps–StudyandInterpretationofWeatherMap,WeatherForecasting.	7
II	GeologicalMaps:Types,SignsBed,andBeddingplane,RockOutcrop, Dip, Strikeetc.	7
III	InstrumentalSurvey: IndianClinometer/Sextant.	8
IV	InstrumentalSurvey:TelescopeAlidade.	8

Note:- No Internal Exam in Practical

Suggested Readings:

1. Sharma,JP(2001)Prayogik Bhugol,RastogiPublication,Meerut
2. Jones,P.A.(1968):FieldworkinGeography,Longmans,GreenandCompanyLtd.,First Publication,London.
3. Kanetker,T.P.andKulkarni,S.V.(1967):SurveyingandLeveling,Vol.IandII V.G.Prakashan,Poona.
4. Natrajan,V.(1976):AdvancedSurveying, B.I.Publications,Mumbai.
5. Pugh,J.C.(1975):SurveyingforFieldScientists,MethuenandCompanyLtd.,London, First Publication.
6. Punmia,B.C.(1994):Surveying,VolI,LaxmiPublicationsPrivateLtd,NewDelhi.

7. Shephard,F.A.(1968):SurveyingProblemsandSolutions,EdwardArnold(Publishers) Ltd,London.
8. Singh,R.L.andSingh,RanaP.B.(1993):ElementsofPracticalGeography.(HindiandE nglisheditions),KalayaniPublishers,LudhianaandNewDelhi.
9. Venkatramaiah,C.(1997):ATextBookofSurveying,UniversitiesPress,Hyderabad.
10. Davis,R.E.andFoote,F.s.(1953):Surveying,4th edition,McGrawHillPublication,Ne w York.

Note: InFinalExaminationStudentshallbeexaminedbyexternalandinternalexaminers.Marks Distribution:WrittenExam (60).Viva (10) .Practical File (10) , Instrumental Surveys (20).

MAASHAKUMBHARIUNIVERSITYSAHARANPUR

Semester-wiseTitlesofthePapersin BA(Geography)

Year	Sem.	Course Code	NEPCode	PaperTitle	Theory/ Practical	Credits
3rdYearDegree						
3	V	0511101	A110501T	RegionalGeography	Theory	4
3	V	0511102	A110502P	BasicsofRemoteSensingandGIS	Theory	4
3	V	0511160	A110503R	Tour/ Field study	Practical	2
3	V	0511165	A110504R	ProjectReport-1	Practical	4
3	VI	0611101	A110601T	GeographyofIndia	Theory	4
3	VI	0611102	A110602T	EvolutionofGeographical Thoughts	Theory	4
3	VI	0611180	A110603P	RemoteSensingandGIS	Practical	2
3	VI	0611165	A110604R	ProjectReport-2	Practical	4

BA 3rd YearSemester-VCourse I(Theory)

Program/Class: Diploma/BA	Year:Third	Semester:Fifth
Subject:Geography		
CourseCode:0511101	CourseTitle: **RegionalGeography:NorthEast Asia**	

CourseOutcomes:Studentswillbeabletounderstand

- Tounderstandthe Conceptof Regional Study.
- ToFamiliarizethestudentswithSocio-economicaspectsoftheRegion.
- Todevelopunderstandingabout the countriesoftheRegion.

Credits:4	CoreCompulsory
Max.Marks: 25+75	Min.PassingMarks: 40
TotalNo.of Lectures-Tutorials-Practical(inhoursperweek):L-4/w	

Unit	TopicsonNorth EastAsia	No.of Lectures
I	Region as a geographical entity and as a component of GlobalSystem,Groupingofcountries-geographical,Political,Historical and Cultural importance. (China, Japan, South andNorth Koreaand Taiwan)	8
II	GeologicalStructureand Relief,Climate,ClimaticRegions.	8
III	Vegetation,powerandmineralresources	8
IV	Population-Growth,DistributionandDensity,MigrationandComposition.	8
V	AgricultureCharacteristics, AgriculturalCrops	8
VI	Main industries- Distribution and development, Industrialregionof Countries	7
VII	DetailedStudyof China	7
VIII	DetailedStudyof Japan	6

SuggestedReadings: 1. Dr.M.N.Nigam–Monsoon Asia 2. VishwaNath Niwari– AsiakaBhaugolik Swaroop. 3. H.G. Dobby– MonsoonAsia 4. H.G.Cressy–Asia,Landand people 5. DudleyStamp-Asia
SuggestedContinuousEvaluationMethods: Assignment/Test /Quiz(MCQ)/Seminar/ Presentations
Suggested equivalent online courses:https://onlinecourses.nptel.ac.in/noc21hs50/preview

BA 3rd YearSemester-VCourse II(Theory)

Program/Class: Degree/BA	Year:Third	Semester:Fifth
Subject:Geography		
CourseCode:0511102	CourseTitle:**Basicsof RemoteSensingandGIS**	

CourseLearningOutcomes
Oncompletionofthiscourse,learnerswillbeableto:

- Understand the Basic idea and application of Remote sensing Techniques andGeographicalInformation System.

Credits:4	CoreCompulsory
Max.Marks: 25+75	Min.PassingMarks: 40
TotalNo.of Lectures-Tutorials-Practical(inhoursperweek):L-4/w	

Unit	Topics	No.of Lectures
I	RemoteSensing:Definition,Type,ScopeandHistoricalDevelopment.	7
II	Electro-magneticradiation:Characteristics,spectralregionsandbands. StagesofProcess of Remote Sensing.	7
III	Remotesensingsatellites:Platformandsensors.Resolution:Spatial,Spectral, Temporal,RadiometricResolution.	8
IV	Typesandtheircharacteristics ofaerialphotographs. Basicofimageinterpretation andit\sapplication.	8
V	IntroductionofGIS:Definition,conceptandhistoryofGIS	6
VI	RemoteSensingandGISapplicationsinUrbanPlanning,Smartcity development.	8
VII	RemoteSensingandGISApplicationsinAgriculture,Forestry,Landuse/LandCoverMapping,OceanicStudiesandDisasterManagement.	8
VIII	ComputerfundamentalsforGIS,GISPackageslikeARCGIS,ERDAS, QGIetc.	8

SuggestedReadings:

1. Choniyal,D.D.,(2016)SudurSamvadenEvamBhogolicSuchnaPranalikeSidhant,ShardaPustak Bhawan,Allahabad.
2. Lillesand,T.M.andKiefer,R.W.(2000):RemoteSensingandImagesInterpretation.4th edition. JohnWileyand Sons, NewYork.
3. Campbell,J.B.(2002):IntroductiontoRemoteSensing5thedition,TaylorandFrancisLondon.
4. Bhatta, B.(2010)RemoteSensingandGIS,OxfordUniversityPress,New Delhi.
5. NagPrithivishandKudratM.(1998):DigitalRemoteSensing,ConceptPublishingCompany, New Delhi.
6. Curran,P.J.(1985):PrinciplesofRemoteSensing, Longman,London.
7. Dr.DeviDuttChauniyal:SudurSamvedanAvomBhaugholikSuchanaPranalikeSidhanth,ShardaPustak Bhawan, Allahabad.
8. Prof.P.K.GargPrincipleandTheoryofGeo-informatics,KhannaBookpublication,New Delhi.

SuggestedContinuousEvaluationMethods:
Assignment/Test/ Quiz (MCQ)/Seminar/Presentations

Suggestedequivalentonlinecourses:
CoursesonSwayam/MOOCshttps://onlinecourses.swayam2.ac.in/aic20_ge05/preview

BA3rdYear,Sem.V,C ourseIII

(Practical)

Programme/Class: Degree/BA	Year:Third	Semester:Fifth
Subject:Geography		
CourseCode:0511160	CourseTitle: **Tour/ Field report (Studies of Local site)**	

CourseOutcomes:Studentswillbeabletounderstand

- Thevariationamonggeographicallocations.
- Interactionwithpeople withdifferentnaturalandculturalsettings.
- Studyphysical and human geographyofareabeingvisited.
- LearntoprepareFieldreport

Credits:2	CoreCompulsory
Max.Marks: 100	Min.PassingMarks: 40

TotalNo.of Lectures-Tutorials-Practical(inhoursperweek):P-2/w

Unit	Topics	No.of Lectures
1	HowtoprepareField report,stepsandmethodsforpreparingfieldr eport,Methodology for Research in field studies,Variousaspectsofstudyinfield study,Preparationof field study. (30lecturesshallbetakenbeforeandduringfi eld report)	30

Note:- No Internal Exam in Practical

SuggestedReadings:

Students have to submit field study report of minimum 20 pages consisting socio-economic survey statistical diagram and maps as per required.

SuggestedContinuousEvaluationMethods:
Thefollowingshall bethe guidelinesand structureofEducationaltour;

GeographicalExcursionCommittee

1. Allfaculty members shallorganize geographicalexcursionas'tour in-charge' inrotation accordingto departmental seniioritylist.
2. There shall be Geographical Excursion Committee headed by HOD in University andPrincipal in colleges. Tour in- charge shall act as convener of committee and shallconvene a meeting at the beginning of committee. Four/Five meritorious studentsbasedonlastavailableexaminationresultshallbeinvitedbythefieldin-chargeto participateinmeetingasmembersofcommittee.

3. **Committeeshall:**
   a) Reviewthefieldplan.
   b) Confirmthatallarrangementsshallbemadeinadvancebeforefieldsitedeparture.
   c) Listentotheopinionofstudentsandgiverecommendationstofield-in-chargeaccordingly.
   d) Reviewacademicnatureoftourandevaluateddaywisetourplanandacademicactivityas submitted byTourin-charge

Structureofthe Fieldparty

1. For 20 or less than 20 students one faculty member with one non teaching staff shallaccompany the tour party. For 21 to 50 students two faculty members with one nonteaching staff shall accompany the Tour party. If two faculty members are required fortour, second faculty member shall be selected on the recommendation of tour in-charge. If students are more than 50 then a separate tour batch shall be constituted insamemanner.
2. If female students are also participating in tour and tour in-charge, accompany otherfacultymemberorNonteachingstaffnonearefemaleattended(Femalefacultymember from Geography or any other departments/female non teaching staff) shallaccompanywith tour party.

ResponsibilityofFieldSurveyin-charge

1. Tourshallat leastof6 daysstayat locationwithinterregionvariation.
2. Tour in-charge shall submit tentative day wise activity report in advance to HOD inUniversityand Principalin colleges.
3. Tourin-chargeshallcoordinatewithInstitutes/Colleges/Universities/Researchinstitutes etcin location wheretour is beingplanned forfollowingactivities like;
   a) Interactionofstudents.
   b) Lecturesonvariouslocalphysicalandcultural attributes ofthecareabythe experts.
   c) Localvisit withfacultymembershavingacademicunderstandingofthe area.
4. Lectures by tour in-charge on physical and human characteristics of area being visitedforeducational tour.
5. Survey with students with at least one instrument like Indian clinometer, Sextant, GPSetc.
6. Questionnaire survey on various socio-cultural or any other aspects. Questionnairesmustbe preparedinadvanceandshallbe sharedduringGeographicalExcursionCommitteemeeting.
7. Field survey- in-charge shall collect undertaking from all students which shall becountersinged bytheirguardian.
8. Field survey- in-charge will prepare list of students accompanying the tour with theirinformation like mobile number, address, guardian contact information and one recentcolor photo. One copy will also be submitted to the head in universities and Principalincolleges.

9. Teachershallalwaystrytominimizetourexpenditureofstudentsby;
   a) Usingconcession trainreservation andavoidingbuses ifpossible.
   b) Making stay arrangement of students in advance inyouth hostels/lodges/guesthouseetc.
   c) Trytovisitfewimportantlocationsonlywithobjectivesofspotstudyandavoidingunnecessarytravel forsightseeing.
10. After the completion of tour there shall be presentation by students regarding learningoutcomes and experiences under the supervision of tour in-charge. Presentation shallbe attended by Geographical Excursion Committee members along with other facultymembers,staff, studentsetc.
11. Allstudentsshallsubmittourreportundersupervisionoftourin-chargeforevaluation. Tour report shall portray all activities conducted and places visited for thepurposesof study.
12. In case of any incident/injury where one or more than one student can't join tour partyin return journey. One teaching/non teaching staff member shall stay with student untilstudent's guardian arrives or alternative arrangement is not made by the college. Incase tour in-charge stays the other teacher/ staff member shall act as tour in-charge forremainingtour period accordingto in-charge.

Exemptionof StudentsfromTour/Fieldwork

1.Field survey can be exempted in very special circumstances on recommendation offield survey in-charge and head (in University) or Principal (in Colleges). Exemptedstudents will prepare local tour report on his/her own local tour visits. Report shall bepreparedunder supervisionof tourin-charge.

TA,DA and otherexpenses

1.The TA, DA and other expenses of teachers and attendants shall be met out by collegeasadmissible to theircadreas pergovernment rules.

Suggestedequivalentonlinecourses

BA 3rd YearSemester-VCourse III(Practical)

Programme/Class: Degree/BA	Year:Third	Semester:Fifth
Subject:Geography		
CourseCode:0511165	CourseTitle:**ProjectReport-1**	
CourseOutcomes: Studentswill be ableto understand • In-depthknowledgeofresearchmethodology. • LearntoprepareProjectReport.		
Credits:3	CoreCompulsory	
Max.Marks: 100	Min.PassingMarks: 40	
TotalNo.of Lectures-Tutorials-Practical(inhoursperweek):P-2/w		

Unit	Topics	No. ofLectures
I	Meaning,typesandsignificanceofResearch,Literaturereview and formulation of research design, research problem,objectives,hypothesis,Researchmaterialsandmethods, Samplingetc.Techniquesofwritingscientificreports:Preparingnotes,references,bibliography,abstractandkeywordsetc. **Note:** 1. Eachfacultymembershallteachthesetopicsofresearchtohis/herGroup ofstudentsindependently. 2. Students shall choose supervisor according to his/ herresearchinterestandspecializationofFacultymember.	30

Note:- No Internal Exam in Practical

SuggestedReadings:

Thiscourse canbeoptedasanelectivebythe studentsof following subjects:Openfor all

SuggestedContinuousEvaluationMethods:
Seminar, Presentation,
VIVASuggestedequivalentonlineco
urses

BA 3rd Year,Semester-VICourse I(Theory)

Program/Class: Degree/BA	Year:Third	Semester:Sixth
Subject:Geography		
CourseCode:0611101	CourseTitle:**Geographyof India**	

CourseLearningOutcomes
Oncompletionofthiscourse,learnerswillbeableto:

- Understandtheimportanceof"EkBharatShresthaBharat"
- Understandthewinder aspectsofGeographyofIndia

Credits:4	CoreCompulsory
Max.Marks: 25+75	Min.PassingMarks: 40
TotalNo.of Lectures-Tutorials-Practical(inhoursperweek):L-4/w	

Unit	Topics	No. ofLectures
I	SpacerelationshipofIndiawithneighboringcountries;Structureandrelief;Drainagesystemandwatersheds;Physiographic regions;, Unityindiversity.	8
II	MechanismofIndianmonsoonsandrainfallpatterns,Tropicalcyclones,andwesterndisturbances;Floodsanddroughts; Climatic regions; Natural vegetation; Soil types andtheirdistributions.	8
III	Resources:energy,minerals,Forestand wildlife resourcesand their conservation (A study of wildlife Siwalik sanctuary)(BetweenRiver Yamunaand Ganga)	7
IV	Industry: Locational factors of industries; Industrialregionalization;New industrial policies;	7
V	CulturalSetting:Racial.linguisticandethnicdiversities:	8
VI	Population: Growth, distribution, and density of population;Demographic attributes: sex-ratio, age structure, literacy rate,work-force,dependencyratio,longevity;migration(inter-regional,intraregionalandinternational)andassociatedproblems ;Population problems and policies;	8

VII	Agriculture:Infrastructure:irrigation,seeds,fertilizers,power;Institutionalfactors:Croppingpattern,agriculturalproductivity,agriculturalintensity,cropcombination,landcapability; Agro and social-forestry: Green revolution and itssocio-economic and ecological implications.	8
VIII	Settlements: Types, pattern, and morphology of ruralsettlements;Urban developments;-Slums.	8

SuggestedReadings:

1. Chauhan,P.R.andPrasad,M.(2003):BharatKaVrihadBhugol,VasundharaPrakashan, Gorakhpur.
2. Gautam,A.(2006):AdvancedGeographyofIndia,ShardaPustakBhawan,Allahabad
3. BansalSC(2018) Bharat KaBhugol,Meenakshi Publication,Meerut.
4. Nag,P.andGupta,S.S.(1992):GeographyofIndia,ConceptPublishingCompany,New Delhi.
5. Rao,B.P.(2007):BharatkeeBhaugolikSameeksha,VasundharaPrakashan,Gorakhpur .
6. Sharma,T.C.andCoutinho,O.(2003):EconomicandCommercialGeographyofIndia, Vikas Publishing HousePrivate Ltd. NewDelhi.
7. Singh,J.(2003):India:AComprehensiveSystematicGeography.GyanodayaPrakashan,Gorakhpur
8. Singh,R.L.(ed.)(1971):India:ARegionalGeography.NationalGeographicalSocietyofIndia, Varanasi.
9. 13.Spate,O.H.K.,LearmonthA.T.A.andFarmer,B.H.(1996):India,PakistanandSriLanka. Methuen,London, 7th edition.
10. Tiwari,R.C.(2007):Geographyof India,PrayagPustakBhawan,Allahabad.
11. Wadia,D.N.(1959):GeologyofIndia.Mac-MillanandCompany,Londonandstudentedition, Madras.
12. Khullar,D.R.(2007):India:AComprehensiveGeography,KalyaniPublishers,NewDelhi.

BA 3rd YearSemester- VICourse II(Theory)

Program/Class: Degree/BA	Year:Third	Semester:Sixth
Subject:Geography		
CourseCode:0611102	CourseTitle: **EvolutionofGeographicalThought**	

CourseLearningOutcomes
Oncompletionofthiscourse,learnerswillbeableto:

- UnderstandtheContributionof IndiaandotherrenownedGeographers
- UnderstandtheconceptofevolutionofGeographicalThought.

Credits:4	CoreCompulsory
Max.Marks: 25+75	Min.PassingMarks: 40

TotalNo.of Lectures-Tutorials-Practical(inhoursperweek):L-4/w

Unit	Topics	No. ofLectures
I	ContributionofIndianGeographersinAncient India.	7
II	EarlyOriginsofGeographicalThinking,Conceptsofdistributions; relationships, interactions, areal differentiationandspatial organization in Geography	7
III	Dualisms in geography; systematic & Regional geography,physical & human geography, Systematic and with regionalgeography.Themythandrealityabout dualisms.	8
IV	ContributionofGreek&Romangeographersinancientworld.	7
V	ContributionofArabgeographersinMiddleages,Renaissance period in Europe. Renowned travelers and theirgeographicaldiscoveries.	8
VI	Germanschoolofthought-Kant,Humboldt,Ritter,Ratzel,Frenchschoolofthought–Contribution ofBlache &Brunhes.	8

VII	American school–Contribution of Sample, Huntington & CarlSauer.Britishschool-ContributionofMackinder,Herbertson& L.D. Stamp.	7

VIII	ParadigmsinGeography,ThomasKuhntheoryaboutVIIIthegrowth and development of science.	8

SuggestedReadings:

1. Ali,S.M.(1960):ArabGeography.InstituteofIslamicStuUniversity.Aligarh,FirstEdition.
2. Dikshit,R.D.(2003):GeographicalThought.ACriticalHistoryofIndia,NewDelhi.(in English and Hindi).
3. 5. Dube, B. (1967): Geographical Concepts in Ancient India NationalGeographicalSocietyofIndia,Varanasi.
4. Hartshorne,R.(1959):PerspectiveontheNatureofGeography,JohnMurray,London
5. Harvey,D.(1969):ExplanationsinGeography.Arnold, London,
6. Holt-Jensen,A.(1980):Geography:ItsHistoryandConceptsHarperandRowPublishers, London.
7. Husain,Majid.(2002):EvolutionofGeographicThought,RawatPublications,Jaipur.
8. Rawling,E.andDaugherty,R.(eds.)(2005):GeographyintotheTwenty-firstCentury.2ndedition. John Wileyand Sons, Chichester.
9. Taylor,G.(ed.)(1953):GeographyintheTwentiethCentury.MethuenandCompanyLondon.
10. S.C.Bansal(2020):BhougolikChintan.MeenakshiPrakashan,Meerut.
11. S.D.Maurya:Bhougolik Chintanka Itihas,Prawalikapublication, Prayagraj.

Suggested Continuous Evaluation Methods:Assignment/test/Quiz(MCQ)/Seminar/Presentation

Suggestedequivalentonlinecourses:
Courses on Swayam / MOOCshttps://onlinecourses.swayam2.ac.in/cec21lg06/preview

BA 3rd YearSemester -VICourse III(Practical)

Program/Class: Degree/BA	Year:Third	Semester:Sixth
Subject:Geography		
CourseCode:0611180	CourseTitle: **RemoteSensingandGIS**	

CourseLearningOutcomes
Oncompletionofthiscourse,learnerswillbeableto:

- UnderstandandConceptualizeAerialphotographyRemoteSensingandGISTechnique.
- AerialPhotography,RemoteSensingand mappingofdisastermanagement.
- BasicideaofGeographical InformationSystem.

Credits:2	CoreCompulsory
Max.Marks: 100	Min.PassingMarks: 40

TotalNo.of Lectures-Tutorials-Practical(inhoursperweek):P-2/w

Unit	Topics	No. ofLectures
I	AerialPhotographs-meaningandtypes,techniquesofphotography and photogrammetry, forward. Over laps, lateraloverlaps,Coverageofareabyaerial photographs.	7
II	Remotesensing-Definition,types,scope,development.	7
III	RemoteSensing-Electro-magneticRadiation-characteristics	7
IV	RemoteSensing-Satellites– platformsandSensors	7
V	RemoteSensing-Resolutiontypes	7
VI	RemoteSensingandGISapplication	6
VII	RemoteSensing–Studyof GPS	6

Note:- No Internal Exam in Practical

SuggestedReadings:

1. Chaunial,D.D.(2004):RemoteSensingandGeographicalInformationSystem(inHindi), ShardaPustak Bhawan, Allahabad
2. Cracknell,A.andLadson,H.(1990): RemoteSensingYearBook.TaylorandFrancis,London.
3. Curran,P.J.(1985):PrinciplesofRemoteSensing. Longman,London.
4. Deekshatulu,B.L.andRajan,Y.S.(ed.)(1984):RemoteSensing.IndianAcademyofScienc e,Bangalore.
5. Floyd,F.andSabins,Jr.(1986):RemoteSensing:PrinciplesandInterpretation. W.H.Freeman,New York.
6. Gautam,N.C.andRaghavswamy,V.(2004).:LandUse/LandCoverandManagementPrac tices inIndia. B.S. Publication.,Hydrabad.
7. Jensen,J.R.(2004):RemoteSensingoftheEnvironment:AnEarthResourcePerspective.P renticeHall,EnglewoodCliffs,NewJersey.Indianreprintavailable.
8. Nag,P.(ed.)(1992):ThematicCartographyandRemoteSensing.ConceptPublishingCom pany, New Delhi.
9. Campell,J.B.(2003):IntroductiontoRemoteSensing.4th edition.TaylorandFrancis,Lond on.
10. P.K.GargPrincipleandTheoryofGeo-informatics,KhannaBookPublication,NewDelhi.

Note: InFinalExaminationStudentshallbeexaminedbyexternalandinternalexaminers. MarksDistribution:WrittenExam,Viva,PracticalFile,MapPreparationusingopensourceGIS, ImageprocessingSoftwareUse.

BA3rdYear,
Semester-VI
Course
III(Practical)

Program/Class: Degree/BA	**Year:Third**	**Semester:Sixth**
Subject:Geography		
CourseCode:0611165	CourseTitle:**ProjectReport-2**	
CourseOutcomes: Studentswill be ableto understand • In-depthknowledgeandapplicationofRS andGIStechnologyinresearch. • LearntopreparеProject Report.		
Credits:3	CoreCompulsory	
Max.Marks: 100	Min.PassingMarks: 40	
TotalNo.of Lectures-Tutorials-Practical(inhoursperweek):P-2/w		

Unit	**Topics**	**No. of Lectures**
I	Projectreport shallbeonanytopicof interestof students. It must include area of disaster management, Remote sensingand GIS technology directly or indirectly. Like project can bebased on investigation of any issue using above technology orthesetechnologymustbeusedindataanalysisorrepresentation. Note: 1. Each faculty member shall teach and guide to his/herGroupofstudents independently. 2. Students shall choose supervisor according to his/ herresearchinterestandspecializationofFacultymember .	30

Note:- No Internal Exam in Practical

SuggestedReadings:

Thiscourse canbeoptedasanelectivebythe studentsof following subjects:Openfor all

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SuggestedContinuousEvaluationMethods:
Seminar,Presentation,VIVA

Suggestedequivalentonlinecourses