Vidyasagar University

Curriculum for B.Sc. Honours in Geography

[Choice Based Credit System]

Semester-I

Sl.No.	Name of the Subject	Nature	Code	Teaching Scheme in hour per week			Credit	Marks
				L	T	P		
C1	**C1T:** Geotectonic and Geomorphology	Core Course-1		5	1	0	6	75
C2	**C2T:** Cartographic Techniques	Core Course-2		4	0	0	6	75
	C2P: Cartographic Techniques Lab	Core Course-2 [Practical]		0	0	4		
GE-1	GE-1	GE					4/5	75
	GE-1	GE					2/1	
AECC	English	AECC					2	50
				Total Credits = 20				

AECC- Ability Enhancement Compulsory Course: English /Modern Indian Language

Interdisciplinary/Generic Elective (GE) from other Department

[**Four papers are to be taken and each paper will be of 6 credits**]:(Papers are to be taken from any of the following discipline **Anthropology/Economics/Geology/Computer Sc/Mathematics/Zoology/Botany /Statistics/Chemistry /Physiology**

Semester-1

Core Course

Core -1

CC- T: Geotectonics and Geomorphology Credits 06

C1T1 - Geotectonics and Geomorphology

Geotectonics and Geomorphology	
	6 Credits

Unit I: Geotectonics **2 Credits**

1. Earth's tectonic and structural evolution with reference to geological time scale
2. Earth's interior with special reference to seismology. Isostasy: Models of Airy and Pratt
3. Plate Tectonics: Processes at constructive, conservative, destructive margins and hotspots; resulting landforms
4. Folds and Faults—origin and types

Unit II: Geomorphology **4 Credits**

1. Degradational processes: Weathering, mass wasting and resultant landforms
2. Processes of entrainment, transportation and deposition by different geomorphic agents. Role of humans in landform development.
3. Development of river network and landforms on uniclinal and folded structures
4. Landforms on igneous rocks with special reference to Granite and Basalt
5. Karst landforms: Surface and sub-surface. Coastal processes and landforms.
6. Glacial and fluvio-glacial processes and landforms; fluvio-glacial landforms
7. Aeolian and fluvio-aeolian processes and landforms; fluvio-aeolian processes
8. Models on landscape evolution: Views of Davis, Penck, King and Hack

Reference Books

- Bloom A. L., 2001: Geomorphology: A Systematic Analysis of Late Cenozoic Landforms, Prentice-Hall of India, Third edition , New Delhi.
- Bridges E. M., 1990: World Geomorphology, Cambridge University Press, Cambridge.
- Christopherson, Robert W., (2011), Geosystems: An Introduction to Physical Geography, 8 Ed., Macmillan Publishing Company
- Kale V. S. and Gupta A., 2001: Introduction to Geomorphology, Orient Longman, Hyderabad.
- Knighton A. D., 1984: Fluvial Forms and Processes, Edward Arnold Publishers, London.
- Selby, M.J., (2005), Earth's Changing Surface, Indian Edition, OUP
- Skinner, Brian J. and Stephen C. Porter (2000), The Dynamic Earth: An Introduction to physical Geology, 4th Edition, John Wiley and Sons
- Thornbury W. D., 1969: Principles of Geomorphology, Wiley.

Core -2

CC-T: Cartographic Techniques — Credits 06

C2T2 – Cartographic Techniques — Credits 04

Cartographic Techniques	
	4 Credits

1. Maps: Classification and types. Components of a map.
2. Concept and application of scales: Plain, comparative, diagonal and vernier
3. Coordinate systems: Polar and rectangular. Concept of geoid and spheroid
4. Concept of generating globe. Grids: angular and linear systems of measurement
5. Bearing: Magnetic and true, whole-circle and reduced.
6. Map projections: Classification, properties and uses. Concept and significance of UTM projection.
7. Basic concepts of surveying and survey equipment: Prismatic compass, dumpy level, theodolite, Abney level, clinometer.
8. Survey of India topographical maps: Reference scheme of old and open series. Information on the margin of maps

Reference Books

- Anson R. and Ormelling F. J., 1994: International Cartographic Association: Basic Cartographic Vol. Pregmen Press.
- Gupta K.K. and Tyagi, V. C., 1992: Working with Map, Survey of India, DST, New Delhi.
- Mishra R.P. and Ramesh, A., 1989: Fundamentals of Cartography, Concept, New Delhi.
- Monkhouse F. J. and Wilkinson H. R., 1973: Maps and Diagrams, Methuen, London.
- Rhind D. W. and Taylor D. R. F., (eds.), 1989: Cartography: Past, Present and Future, Elsevier, International Cartographic Association.
- Robinson A. H., 2009: Elements of Cartography, John Wiley and Sons, New York.
- Singh R. L. and Singh R. P. B., 1999: Elements of Practical Geography, Kalyani Publishers.
- Sarkar, A. (2015) Practical Geography: A systematic approach. Orient Black Swan Private Ltd., New Delhi

C2 P2 - Cartographic Techniques Lab Credits 02

Cartographic Techniques	
	2 Credits
A Project File, comprising one exercise each is to be submitted 1. Graphical construction of scales: Plain, comparative, diagonal and vernier 2. Construction of projections: Polar Zenithal Stereographic, Simple conic with two standard parallels, Bonne's, Cylindrical Equal Area, and Mercator's. 3. Delineation of drainage basin from Survey of India topographical map. Construction and interpretation of relief profiles (superimposed, projected and composite), relative relief map, slope map (Wentworth), and stream ordering (Strahler) on a drainage basin. **4.** Correlation between physical and cultural features from Survey of India topographical maps. using transect chart	

Generic Elective

GE-1 [Interdisciplinary for other department]

GE-T: Disaster Management Credits 06

GE1 T1 – Disaster Management

Disaster Management	
	6 Credits

1. Definition and Concepts of Hazards and Disasters; Risk and Vulnerability; Classification of hazards
2. Causes and consequences of hazards: Physical, economic and cultural
3. Role of National and International organizations in disaster management.
4. Causes, Impact, Distribution and Mapping of: Earthquake and Tsunami, Landslides
5. Causes, Impact, Distribution and Mapping of: Flood and drought
6. Causes, Impact, Distribution and Mapping: Soil erosion, accidental release of toxic chemicals,
7. Response and Mitigation to Disasters: Institutional set up, NDMA and NIDM
8. Indigenous Knowledge and Community-Based Disaster Management; Do's and Don'ts During and Post Disasters,
9. Emerging approaches to Disaster management: (a) Pre-disaster stage Preparedness- hazard zonation maps-predictability and forecasting warning, land use zoning, Information, Education & Communication (IEC) Disaster resistance house construction, Population reduction in vulnerable area and awareness. (b) Emergency Stage- Rescue training for search and operation at national and regional level, ground management plan preparation, immediate relief, Assessment surveys. (c) Post disaster stage rehabilitation – Political administrative aspects, social aspect, economic aspect, cultural aspect and environmental aspects.
10. Regional perspectives of hazards in India with reference to dimension, causes,

consequences and remedial measures: (a) Hills/ coasts, (b) Terrorism

11. National and international policies for disaster management.
12. Role of geospatial technology (RS, GNSS and GIS) in disaster management

Reference Books

- Government of India. (1997) Vulnerability Atlas of India. New Delhi, Building Materials & Technology Promotion Council, Ministry of Urban Development, Government of India.
- Kapur, A. (2010) Vulnerable India: A Geographical Study of Disasters, Sage Publication, New Delhi.
- Modh, S. (2010) Managing Natural Disaster: Hydrological, Marine and Geological Disasters, Macmillan, Delhi.
- Singh, R.B. (2005) Risk Assessment and Vulnerability Analysis, IGNOU, New Delhi. Chapter 1, 2 and 3
- Singh, R. B. (ed.), (2006) Natural Hazards and Disaster Management: Vulnerability and Mitigation, Rawat Publications, New Delhi.
- Sinha, A. (2001). Disaster Management: Lessons Drawn and Strategies for Future, New United Press, New Delhi.
- Stoltman, J.P. et al. (2004) International Perspectives on Natural Disasters, Kluwer Academic Publications. Dordrecht.
- Singh Jagbir (2007) "Disaster Management Future Challenges and Oppurtunities", 2007. Publisher- I.K. International Pvt. Ltd. S-25, Green Park Extension, Uphaar Cinema Market, New Delhi, India (www.ikbooks.com).

Vidyasagar University

Curriculum for B.Sc. Honours in Geography [Choice Based Credit System]

Semester-II

Sl. No.	Name of the Subject	Nature	Code	Teaching Scheme in hour per week			Credit	Marks
				L	T	P		
C3	**C3T:** Human Geography	Core Course-3		5	1	0	6	75
C4	**C4T:** Cartograms and Thematic Mapping	Core Course-4		4	0	0	6	75
	C4P: Cartography Lab	Core Course-4 [Practical]		0	0	4		
GE-2	GE-2	GE					4/5	75
	GE-2	GE					2/1	
AEC C-2	Environmental Studies	AECC					4	100
				Total Credits = 22				

L=Lecture, T=Tutorial, P=Practical

AECC- Ability Enhancement Compulsory Course: Environmental Studies.
Interdisciplinary/Generic Elective (GE) from other Department
[**Four papers are to be taken and each paper will be of 6 credits**]: (Papers are to be taken from any of the following discipline **Anthropology/Economics/Geology/Computer Sc/Mathematics/Zoology/Botany/Statistics/Chemistry /Physiology**

Semester-II
Core Course
Core -3

CC-3: Human Geography **Credits 06**

C3 T– Human Geography

Human Geography

6 Credits

Unit I: Nature and Principles **2 Credits**

1. Nature and scope and recent trends. Elements of Human Geography
2. Approaches to the study of Human Geography; Resource, Locational, Landscape, Environmental
3. Evolution of humans. Concept of race and ethnicity
4. Space, society and cultural regions (language and religion)

Unit :II: Society, Demography and Ekistics **4 Credits**

1. Evolution of human societies: Hunting and food gathering, pastoral nomadism, subsistence farming, industrial and urban societies
2. Human adaptation to environment: Eskimo, Masai, Jarwa, Gaddi, Santhals.
3. Population growth and distribution, population composition; demographic transition model
4. Population–Resource regions (Ackerman)
5. Human population and environment with special reference to development–environment conflict
6. Social morphology and rural house types in India
7. Types and patterns of rural settlements
8. Types and patterns of urban settlements

Reference Books

- Bergman, E.F (1995): Human Geography-Culture, Connections and Landscape, Prentice Hall, New Jersey
- Chisholm. (1975): Human Geography, Penguin Books, Hermondsworth.
- Daniel, P.A. and Hopkinson, M.F. (1989) The Geography of Settlement, Oliver & Boyd, London.
- Johnston R; Gregory D, Pratt G. et al. (2008) The Dictionary of Human Geography, Blackwell Publication.
- Jordan-Bychkov et al. (2006) The Human Mosaic: A Thematic Introduction to Cultural Geography. W. H. Freeman and Company, New York.
- Norton. W. (2001): Human Geography, 4th Edition Oxford University press, Oxford
- Pearce D. (1995): Tourism Today: A Geographical Analysis, 2nd edition, Longman Scientific & Technical, London
- Pickering K. and Owen A. A. (1997): An Introduction to Global Environmental Issues, 2nd edition Rutledge, London.
- Raw, M. (1986): Understanding Human Geography: A Practical Approach, Bell and Hyman. London
- Rubenstein, J.M. (2002), The Cultural Landscape, 7th edition, Prentice Hall, Englewood Cliffs
- Smith D M (1982): Human Geography: A Welfare Approach, Edward Arnold, London

Core 4

CC-4 : Cartograms and Thematic Mapping Credits 06

C4 T : Cartograms and Thematic Mapping Credits 04

4 Credits

1. Concepts of rounding, scientific notation, logarithm and anti-logarithm, natural and log scales
2. Diagrammatic representation of data: Line, Bar, and Circle
3. Representation of point data: Isopleths.
4. Representation of area data: Dots, proportional circles and choropleth
5. Preparation and interpretation of large scale thematic maps: Geomorphological

maps

6. Preparation and interpretation of large scale thematic maps: Climatological maps
7. Preparation and interpretation of large scale thematic maps: Landuse landcover maps
8. Preparation and interpretation of large scale thematic maps: Socio-economic maps

Reference Books

- Cuff J. D. and Mattson M. T., 1982: Thematic Maps: Their Design and Production, Methuen Young Books
- Dent B. D., Torguson J. S., and Holder T. W., 2008: Cartography: Thematic Map Design (6th Edition), Mcgraw-Hill Higher Education
- Gupta K. K. and Tyagi V. C., 1992: Working with Maps, Survey of India, DST, New Delhi.
- Kraak M.-J. and Ormeling F., 2003: Cartography: Visualization of Geo-Spatial Data, Prentice-Hall.
- Mishra R. P. and Ramesh A., 1989: Fundamentals of Cartography, Concept, New Delhi.
- Singh R. L. and Singh R. P. B., 1999: Elements of Practical Geography, Kalyani Publishers.
- Slocum T. A., Mcmaster R. B. and Kessler F. C., 2008: Thematic Cartography and Geovisualization (3rd Edition), Prentice Hall.
- Tyner J. A., 2010: Principles of Map Design, The Guilford Press.
- Sarkar, A. (2015) Practical geography: A systematic approach. Orient Black Swan Private Ltd., New Delhi

C4 P: Cartography (Lab) **Credits 02**

Cartography

2 Credits

A Project File, comprising one exercise each is to be submitted

1. Traverse survey using Prismatic Compass
2. Levelling by Dumpy Level and Prismatic Compass
3. Thematic maps: Proportional squares, pie diagrams with proportional circles, dots and spheres
4. Thematic maps: Choropleth, isoline map, chorochromatic map

Generic Elective

GE-2 [Interdisciplinary for other department]

GE2 : Geospatial Technology **Credits 06**

GE2 T : Geospatial Technology

Geospatial Technology

6 Credits

1. Components, scope and historical development of geospatial technology
2. Concepts of spheroid, ellipsoid and projection systems. Significance of WGS 84 and UTM

3. Data types and structures in spatial technology.
4. Principles of land-based surveying with reference to auto level and total station
5. Classification of Remote Sensing platforms, sensors and resolution. IRS (Resourcesat and Cartosat) and Landsat systems.
6. Principles of georeferencing of maps and images
7. Image enhancement, band combination and rationing. Vegetation indices.
8. Image classification and preparation of thematic maps. Raster to vector conversion.
9. Sources, preparation and manipulation of GIS data. Spatial modelling and overlay analysis.
10. GNSS: Principles of satellite positioning and navigation. Collection of waypoints and exporting to GIS
11. Principles of preparing DEMs from optical and RADAR sensors with reference to CartoDEM and SRTM data
12. Integration of different components of spatial technology. Development of web-based spatial platforms with reference to Bhuvan and Google Earth / Google Map

Reference Books

- C. Esperança and H. Samet, An overview of the SAND spatial database system, to appear in Communications of the ACM, 1997. http://www.cs.umd.edu/~hjs/pubs/sandprog.ps.gz
- G. Hjaltason and H. Samet, Ranking in Spatial Databases in Advances in Spatial Databases —4th Symposium, SSD'95, M. J. Egenhofer and J. R. Herring, Eds., Lecture Notes in Computer Science 951, Springer-Verlag, Berlin, 1995, 83-95. http://www.cs.umd.edu/~hjs/pubs/incnear.ps
- H. Samet, Spatial Data Structures in Modern Database Systems: The Object Model, Interoperability, and Beyond, W. Kim, Ed., Addison-Wesley/ACM Press, 1995, 361-385. http://www.cs.umd.edu/~hjs/pubs/kim.ps
- H. Samet, Applications of Spatial Data Structures: Computer Graphics, Image Processing, and GIS, Addison-Wesley, Reading, MA, 1990. ISBN 0-201- 50300-0.
- H. Samet, the Design and Analysis of Spatial Data Structures, Addison-Wesley, Reading, MA, 1990. ISBN 0-201-50255-0.
- H. Samet and W. G. Aref, Spatial Data Models and Query Processing in Modern Database Systems: The Object Model, Interoperability, and Beyond, W. Kim, Ed., Addison-Wesley/ACM Press, 1995, 338-360. http://www.cs.umd.edu/~hjs/pubs/kim2.ps
- C. D. Tomlin, Geographic Information Systems and Cartographic Modeling, Prentice-Hall, Englewood Cliffs, NJ, 1990. ISBN 0-13-350927-3.

Vidyasagar University

Curriculum for B.Sc. (Honours) in Geography
[Choice Based Credit System]

Semester-III

Course	Course Code	Name of the Subjects	Course Type/ Nature	Teaching Scheme in hour per week			Credit	Marks
				L	T	P		
CC-5		**C5T:**Climatology	Core Course - 5	5	1	0	6	75
CC-6		**C6T:**Statistical Methods in Geography	Core Course - 6	4	0	0	6	75
		C6P: Statistical Methods in Geography- Practical		0	0	4		
CC-7		**C7T:**Geography of India	Core Course - 7	5	1	0	6	75
GE-3	TBD		Generic Elective-3				4/5	75
							2/1	
SEC-1		**SEC1:** Coastal Management	Skill Enhancement Course-1	1	1	0	2	50
Semester Total							**26**	**350**

L=Lecture, **T=** Tutorial, **P=**Practical, **CC =** Core Course, **GE**= Generic Elective, **SEC** = Skill Enhancement Course, **TBD =** to be decided

Generic Elective (GE) (Interdisciplinary) from other Department [**Four papers are to be taken and each paper will be of 6 credits**]:

Papers are to be taken from any of the following discipline: **Anthropology/ Economics/ Geology/Computer Sc/Mathematics/Zoology/Botany /Statistics / Chemistry /Physiology**

Modalities of selection of Generic Electives (GE): A student shall have to choose **04** Generic Elective (GE1 to GE4) strictly from **02** subjects / disciplines of choice taking exactly **02** courses from each subjects of disciplines. Such a student shall have to study the curriculum of Generic Elective (GE) of a subject or discipline specified for the relevant semester.

Semester- III
Core Course (CC)

CC 5: Climatology **Credits 06**

C5T: Climatology

Unit I: Elements of the Atmosphere **2 Credits**

1. Nature, composition and layering of the atmosphere,
2. Isolation: controlling factors. Heat budget of the atmosphere.
3. Temperature: horizontal and vertical distribution. Inversion of temperature: types, causes and consequences.
4. Greenhouse effect and importance of ozone layer**.**

Unit II: Atmospheric Phenomena and Climatic Classification **4 Credits**

1. Condensation: Process and forms. Mechanism of precipitation: Bergeron-Findeisen theory, collision and coalescence. Forms of precipitation.
2. Air mass: Typology, origin, characteristics and modification.
3. Fronts: warm and cold; frontogenesis and frontolysis.
4. Weather: stability and instability; barotropic and baroclinic conditions.
5. Circulation in the atmosphere: Planetary winds, jet stream, index cycle
6. Tropical and mid-latitude cyclones
7. Monsoon circulation and mechanism with reference to India
8. Climatic classification after Köppen, Thornthwaite and Oliver

Suggested Readings:

1. Barry R. G. and Carleton A. M., 2001: Synoptic and Dynamic Climatology, Routledge, UK.
2. Barry R. G. and Corley R. J., 1998: Atmosphere, Weather and Climate, Routledge, New York.
3. Critchfield H. J., 1987: General Climatology, Prentice-Hall of India, New Delhi
4. Lutgens F. K., Tarbuck E. J. and Tasa D., 2009: The Atmosphere: An Introduction to Meteorology, Prentice-Hall, Englewood Cliffs, New Jersey.
5. Oliver J. E. and Hidore J. J., 2002: Climatology: An Atmospheric Science, Pearson Education, New Delhi.
6. Trewartha G. T. and Horne L. H., 1980: An Introduction to Climate, McGraw-

C6T – Statistical Methods in Geography

Statistical Methods in Geography **4 Credits**

Unit I **2 Credits**

1. Importance and significance of Statistics in Geography. Discrete and continuous data, population and samples, scales of measurement (nominal, ordinal, interval and ratio), sources of data
2. Collection of data and formation of statistical tables
3. Sampling: Need, types, and significance and methods of random sampling
4. Theoretical distribution: frequency, cumulative frequency, normal and probability

Unit II **2 Credits**

1. Central tendency: Mean, median, mode, partition values
2. Measures of dispersion range, mean deviation, standard deviation, coefficient of variation
3. Association and correlation: Rank correlation, product moment correlation
4. Regression (linear and non-linear) and time series analysis (moving average)

Suggested Readings:

1. Berry B. J. L. and Marble D. F. (eds.): Spatial Analysis – A Reader in Geography.
2. Ebdon D., 1977: Statistics in Geography: A Practical Approach.
3. Hammond P. and McCullagh P. S., 1978: Quantitative Techniques in Geography: An Introduction,
4. Oxford University Press.
5. King L. S., 1969: Statistical Analysis in Geography, Prentice-Hall.
6. Mahmood A., 1977: Statistical Methods in Geographical Studies, Concept.
7. Pal S. K., 1998: Statistics for Geoscientists, Tata McGraw Hill, New Delhi.
8. Sarkar, A. (2013) Quantitative geography: techniques and presentations. Orient Black Swan Private Ltd., New Delhi
9. Silk J., 1979: Statistical Concepts in Geography, Allen and Unwin, London.
10. Spiegel M. R.: Statistics, Schaum's Outline Series.
11. Yeats M., 1974: An Introduction to Quantitative Analysis in Human Geography, McGraw Hill, New York.

C6 P – Statistical Methods in Geography **2 Credits**

A Project File, comprising one exercise each is to be submitted

1. Construction of data matrix with each row representing an aerial unit (districts / blocks / *mouzas* / towns) and corresponding columns of relevant attributes.
2. Based on the above, a frequency table, measures of central tendency and dispersion would be computed and interpreted.
3. Histograms and frequency curve would be prepared on the dataset.
4. From the data matrix a sample set (20%) would be drawn using, random, systematic and stratified methods of sampling and locate the samples on a map with a short note on methods used.
5. Based on of the sample set and using two relevant attributes, a scatter diagram and regression line would be plotted and residual from regression would be mapped with a short interpretation.

CC7: Geography of India **Credits 06**

C7T: Geography of India

Unit I: Geography of India **Credits 04**

1. Tectonic and stratigraphic provinces, physiographic divisions
2. Climate, soil and vegetation: Characteristics and classification
3. Population: Distribution, growth, structure and policy
4. Distribution of population by race, caste, religion, language, tribes and their correlates
5. Agricultural regions. Green revolution and its consequences
6. Mineral and power resources distribution and utilisation of iron ore, coal, petroleum, gas;
7. Industrial development: Automobile and information technology
8. Regionalisation of India: Physiographic (R. L. Singh), Socio-cultural (Sopher) and Economic (Sengupta)

Unit II: Geography of West Bengal **Credits 02**

1. Physical perspectives: Physiographic divisions, forest and water resources
2. Population: Growth, distribution and human development
3. Resources: Mining, agriculture and industries
4. Regional Problem: Darjeeling Hills, Jangalmahal and Sundarban

Suggested Readings:

1. Deshpande C. D., 1992: India: A Regional Interpretation, ICSSR, New Delhi.
2. Johnson, B. L. C., ed. 2001. Geographical Dictionary of India. Vision Books, New Delhi.
3. Mandal R. B. (ed.), 1990: Patterns of Regional Geography – An Intenational Perspective. Vol. 3 – Indian Perspective.
4. Sdyasuk Galina and P Sengupta (1967): Economic Regionalisation of India, Census of India
5. Sharma, T. C. 2003: India - Economic and Commercial Geography. Vikas Publ., New Delhi.

6. Singh R. L., 1971: India: A Regional Geography, National Geographical Society of India.
7. Singh, Jagdish 2003: India - A Comprehensive & Systematic Geography, Gyanodaya Prakashan, Gorakhpur.
8. Spate O. H. K. and Learmonth A. T. A., 1967: India and Pakistan: A General and Regional Geography, Methuen.
9. Tirtha, Ranjit 2002: Geography of India, Rawat Publs., Jaipur & New Delhi.
10. Pathak, C. R. 2003: Spatial Structure and Processes of Development in India. Regional Science Assoc., Kolkata.
11. Tiwari, R.C. (2007) Geography of India. Prayag Pustak Bhawan, Allahabad
12. Sharma, T.C. (2013) Economic Geography of India. Rawat Publication, Jaipur

Skill Enhancement Course (SEC)

SEC-1: Coastal Management **Credits 02**

SEC-1T: Coastal Management

Coastal Management

1. Components of a coastal zone. Coastal morphodynamic variables and their role in evolution of coastal forms.
2. Environmental impacts and management of mining, oil exploration, salt manufacturing, land reclamation and tourism.
3. Coastal hazards and their management using structural and non-structural measures: Erosion, flood, sand encroachment, dune degeneration, estuarine sedimentation and pollution
4. Principles of Coastal Zone Management. Exclusive Economic Zone and Coastal Regulation Zones with reference to India.

Suggested Readings:

- Carter, R.W.G (1988): Coastal Environments: An Introduction to the Physical, Ecological and Cultural Systems of Coastlines, Academic Press, London
- Dayer K.R. (1979): Estuary Hydrography, and Sedimentation, Cambridge Univ. Press, Cambridge.
- Devis R.A. (ed) (1978): Coastal Sedimentary Environmental; Springer-Verlag, New York.
- Harikawa , K. (1978): Coastal Engineering, Univ Of Tokyo Press, Tokyo.
- Inman, D.L. (1960): Shore Processes, Encyclopedia of Science & Technology, Mc Graw Hill, New York.
- Knight, B. and Philip, A. (1979): Estuarine and coastal Land reclamation and water storage, Saxon House.
- Laussn, E and Lato, I.(ed): Chemistry and Biochemistry of estuaries, Wiley, New York.
- Pethick, J. (2000): An Introduction to coastal Geomorphology, Arnold, London.
- Stanley, D.J. and Suist D.J.P.(ed)(1976): Marine Sediment Transport and environmental management;Wiley, NewYork.
- Wagret,P. (1968): Polderlands, Methuen, London

Generic Elective
GE-3 [Interdisciplinary for other department]

GE3: Geography of Tourism **Credits 06**

GE3T: Geography of Tourism

1. Scope and Nature: Concepts and Issues, Tourism, Recreation and Leisure Inter-Relations; Geographical Parameters of Tourism by Robinson.
2. Types of Tourism: Ecotourism, Cultural Tourism, Adventure Tourism, Medical Tourism, Pilgrimage, International, National
3. Factors influencing tourism: historical, natural, socio-cultural and economic; motivating factors for pilgrimages
4. Spatial pattern of tourism: Spatial affinity; areal and locational dimensions comprising physical, cultural, historical and economic; International travel destinations- cultural and historical
5. Impact of tourism: physical, economic and social and perceptive positive and negative impacts;
6. Environmental laws and tourism - current trends, spatial patterns and recent changes;
7. Role of foreign capital and impact of globalization on tourism
8. Recent Trends of Tourism: International and Regional; Domestic (India); Sustainable Tourism, Meeting Incentives Conventions and Exhibitions (MICE)
9. Tourism in India: Tourism Infrastructure; Regional dimensions of tourist attraction; Case Studies of Dal lake, Goa, Garhwal Himalaya, Desert and Coastal Areas
10. Promotion of Tourism - National Tourism Policy
11. Infrastructure and support system - accommodation and supplementary accommodation; other facilities and amenities
12. Tourism circuits-short and longer detraction - Agencies and intermediaries - Indian hotel industry.

Suggested Readings:

1. Dhar, P.N. (2006) International Tourism: Emerging Challenges and Future Prospects. Kanishka, New Delhi.
2. Hall, M. and Stephen, P. (2006) Geography of Tourism and Recreation – Environment, Place and Space, Routledge, London.
3. Kamra, K. K. and Chand, M. (2007) Basics of Tourism: Theory, Operation and Practise, Kanishka Publishers, Pune.
4. Page, S. J. (2011) Tourism Management: An Introduction, Butterworth-Heinemann-USA. Chapter 2.
5. Raj, R. and Nigel, D. (2007) Morpeth Religious Tourism and Pilgrimage Festivals Management: An International perspective by, CABI, Cambridge, USA, www.cabi.org.
6. Tourism Recreation and Research Journal, Centre for Tourism Research & Development, Lucknow
7. Singh Jagbir (2014) "Eco-Tourism" Published by - I.K. International Pvt. Ltd. S-25, Green Park Extension, Uphaar Cinema Market, New Delhi, India (www.ikbooks.com).