

| <b>GIE 508: GEOINFORMATIS OF COASTAL ENVIRONMENTS (Open Elective)</b> |                                                                                                                                                                                                                                                                                                   |       |
|-----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Unit 1                                                                | <b>Introduction:</b> Concepts of <b>Geoinformatics</b> . Outlines of <b>Remote Sensing</b> , Air Photo Interpretation, and Geographic Information System. Aerial photos and remote sensing of coastal environment.                                                                                | 6 hrs |
| Unit 2                                                                | <b>Outlines of Indian Satellites:</b> Indian space Program, Scientific Pay loads from India and abroad, Bhuvan: Description of 3D Satellite Mapping. IRS-P4, Ocean Sat-II: Description and Payloads. IRS-IC/D.A brief note on Hyper spectral Remote Sensing. Resource sat, Cartosat - I & II etc. | 6 hrs |
| Unit 3                                                                | <b>Data and Data products:</b> List of Data and Data Models. Digital Data Products, Topographic Sheets and Theme Analysis, Hydrographic Sheets, Outlines of the I.H.O. Bathymetric measurements and outlines of Echo-sounders and Multibeam unit.                                                 | 6 hrs |
| Unit 4                                                                | <b>Coastal Environments:</b> Geomorphology of Coasts. Classification of Coastal Environments. Relevance Geology and Geotectonic to the genesis of coasts.                                                                                                                                         | 6 hrs |
| Unit 5                                                                | <b>Spatial Analysis of Coastal Environments:</b> Collection of Spatial Data from Coastal Environments. Data Interpretation and use of GIS in modeling studies.                                                                                                                                    | 6 hrs |
| Unit 6                                                                | <b>Coastal Regulations and Zones:</b> Outlines of <b>CRZ-I, CRZ-II, CRZ-III and CRZ-IV</b> . Amendments to the CRZ norms.                                                                                                                                                                         | 6 hrs |
| Unit 7                                                                | <b>Coastal Development:</b> Definition and Description of Ports and Harbours. Application of EIA and CRZ to development Ports and Harbours. EIA Norms and Criteria for Recreation and Water sports.                                                                                               | 6 hrs |
| Unit 8                                                                | <b>Coastal Information System:</b> Concepts of a Coastal Information System. Use of GIS in developing a Coastal Information System. <b>Use of RS and GIS in developing coastal information system.</b>                                                                                            | 6 hrs |

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2. Aradhana, A. 2006. Special Economic Zones: Revisiting the Policy Debate. Economic and Political Weekly, Vol. XLI Nos. 43 and 44, 4-10
3. Aradhana, A. 2009. Genesis, Evolution, and the Changing Role of SEZs in Asia: A Comparative Analysis of Taiwan. Korea and India, Mimeo, Korean Institute of Economic Policy (KIEP) 2-12.
4. Berling, G.L. and Roy, W.W. 1989. Application of Aerial Photographs and Remote sensing Imagery in Urban research and studies. Monticell, 6-33.
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6. Brench, M. C., 1971. City Planning and Aerial information. Harvard Uni., Cambridge. 12-45.
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8. Land, T. G. 1999. ArcView-3D Analyst. ESRI press. 6-23.
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13. Wood, C., 1995. Environmental Impact Assessment – A comparative Review. 1-337.