



MANGALORE UNIVERSITY
DEPARTMENT OF MARINE GEOLOGY
MSc GEOINFORMATICS

GIS 503: CARTOGRAPHY

Course Outcome: Students will learn the techniques of map generation.

CO1: Cartography knowledge is required to generate the topographical maps / base maps. Cartographer can generate different kinds of thematic maps.

CO2: Introduction to Cartographic themes. Cadastral and Chorographical Maps. Representation of Choroschematic maps, and Chorochromatic maps. Concepts of Hydrogeomorphic Maps. Introduction to Population diffusion and the importance of Dot and Multi Dot maps.

Unit 1	Introduction to Cartography Ancient Cartography: Evolution of Cartography, Modern Cartography and Applications, Definition of Maps. Outlines of Map Projections.	08 hrs
Unit 2	Cartographic Themes and Types of Maps Introduction to Cartographic themes. Cadastral and Chorographical Maps. Representation of Choroschematic maps, and Chorochromatic maps. Concepts of Hydrogeomorphic Maps. Introduction to Population diffusion and the importance of Dot and Multi Dot maps	08 hrs
Unit 3	Topographic Maps: Introduction to Topographic Maps. Spatial Information and Marginal Information of Topographic maps. Recovery of Spatial Information from Topographic Maps. Concept of 'Central Theme' and examples.	08 hrs
Unit 4	Hydrographic Charts: Introduction to Hydrographic Charts. Marginal Information and Depth Information of Hydrographic Charts. Scales of Hydrographic Charts. Recovery of Spatial Information from Hydrographic Charts.	08 hrs
Unit 5	Cartographic models: Inductive and Deductive Models, Model Flow Charting, Model Implementation and Verification. Principles of Design and GIS Output, GIS Project design and Management.	08 hrs
Unit 6	Remote Sensing satellites used for Cartography.	08 hrs

References

1. Andy Mitchell, The ESRI Guide to GIS Analysis, Modeling Our World: ESRI Press, (2000). 12-15
 2. Bonham – Carter G.F., Geographic Information System for Geoscientists, Pergamon Press, Tarrytown, New York, 1994. 1-34.
 3. Burough, P.A., and Rachael A, Mec Donnell. Principles of Geographic Information System., Oxford University Press-1998, 22-39.
 4. Demmers, M. N. 2000. Fundamentals of GIS, Willey Student Edition 1-498
 5. Fraser Taylor., P.A., Geographic Information System – The Microcomputer and Modern Cartography, Pergamon Press, 1991. 6-14.
 6. Heywood, Carnelin and Carven, 1998. An Introduction to Geographic Information System. Prentice Hall, 22-61.
 7. Keaies, J. S. Cartographic design and Production London, Longman group, 1973. 2-45.
 8. Les Worell, (Ed) 1990. Geographic Information System, Development and Applications, Belbaven Press. 11-24.
 9. Lillesand T. M. and Kiefer, R. W. Remote Sensing and Image Interpretation. John Wiley & Sons Inc (2000). 8-33.
 10. Longley, P. A., Maguire, D. J., Goodchild, M. F and Rhind, D. W; GIS Principles, Techniques, Applications and Managements, Longman Scientific and Technical, 2001 , 22-44.
 11. Maguire, D. J. Goodchild, M. F., and Rhind, D. W. GIS- Principles and application, Longman Scientific and Technical, 1991.34-46.
 12. Michael Zeiler, The ESRI Guide to Geodatabase Design. ESRI Press, (2000). 2-18.
 13. Misra R. P. and A., Ramesh Publ., Prasaranga, Fundamentals of Cartography Mysore University. (1980). 2-34
 14. Singh R. L., Elements of Practical Geography Publ. Kalyani Publishers, New Delhi (1995).
- Thomas G. Lan Arc View 3D Analyst ESRI Press, (2000). 12-32.