

SAVITRIBAI PHULE PUNE UNIVERSITY Geography

T.Y.B.Sc. (Credit System)

Revised Syllabus (From June-2021)

Semester: V

GG 356: Geoinformatics -I

Objectives:

1. To acquaint the students with new concepts and approaches in Geography.
2. To familiarize the students with the wide application fields in Geography

No. of Credits: 02

No. of Periods: 30

Sr.No.	Topic	Sub-Topic	Learning Points	Periods
1	Introduction to Geoinformatics	Definition of Geoinformatics and its importance and History of GIS	1. Definition of Geoinformatics 2. Scope and Importance of Geoinformatics 3. History of GIS 4. Components of GIS 5. Functions of GIS:GIS tasks-Input, Manipulation, Management, Query analysis, Visualization	08
2	Sources and types of GIS data	A. Sources and Types B. Data Models	1. Toposheets, Surveying, Aerial photographs ,Satellite data and images 2. Data types-Spatial and Non spatial 3. Raster data and their characteristics 4. Vector data and their characteristics	07
3	GIS data editing And attribute data linking	Relationship between entities attribute data linking	1. Topology building topological errors, Locational errors, edge matching 2. Attribute data linking	07
4	Spatial and non-spatial data analysis	Based on spatial and non-spatial data	1. Query analysis-Spatial, Non spatial, Spatiotemporal, dissolve, Overlay analysis, merge, buffer analysis, 2. TIN Spatial analysis, Multicriteria analysis, Overlay analysis, 3. Topographic analysis (DEM and DTM)	08

Reference Books:

1. Kang-tsung Chang (2003) Geographic Information Systems, Tata McGraw Hill, New Delhi
2. Star J, and J. Estes, (1994), Geographic Information Systems: An Introduction, Prentice Hall, New Jersey.

3. Michael F. Goodchild and Karen K. Kemp (1990) Introduction to GIS, National Center for Geographic Information and Analysis, University of California, Santa Barbara.
4. Clarke, Keith C. (1999) Getting Started with Geographic Information Systems, Prentice Hall, New Jersey
5. Lo Albert, C.P., and Young, K.W (2003) Concepts and Techniques of Geographical Information Systems, Prentice Hall of India Pvt. Ltd., New Delhi.
6. Williams J. (1995): Geographic information from space, John Wiley and Sons, England,
7. DeMers Michel N.(2000): Geographic Information Systems, John Wiley and Sons.