

**ELECTIVE COURSE III – 1
GEOGRAPHICAL INFORMATION SYSTEM TECHNOLOGY**

UNIT-I

GIS and the Information Age –Introduction to GIS – Maps and GIS – Digital representation of Geographic data.

UNIT-II

Data quality and Data standards – Raster based GIS data processing – Vector based GIS data processing.

UNIT-III

Visualization of geographic information – Remote sensing and GIS integration – Digital terrain modeling.

UNIT-IV

Spatial analysis and modeling – GIS implementation – GIS Project management – GIS issues and prospects.

UNIT-V

The Future of the GIS and GIS in the Future – Study of GIS authoring tools like ESRI/AutoCAD MAP.

TEXT BOOK:

1. **Lo C. P. , Yeung Albert K. W. ,** Concepts and Techniques of Geographic Information Systems, Prentice Hall of India, 2005 (ISBN 81-203-2230-4) [Unit-1 :(Chapters 1,2,3); Unit-2 : (Chapters 4, 5,6); Unit-3 (Chapters 7,8,9); Unit-4 (Chapters 10,11,12)]
2. NIIT course notes, GIS and AutoCAD Map, Prentice-Hall of India, 2004. (Unit-5) (ISBN 81-203-2519-2).

REFERENCE BOOK:

1. **Bruce E. Davis,** GIS: A Visual Approach, Onward Press, Second Edition, 2005, (ISBN 0-7668-2764-X)
2. **Longley Paul, Goodchild Michael, Maguire David, and David Rahind,** Geographic Information Systems and Science, John Wiley & Sons Ltd, 2005 (ISBN 0-470-87001-x paperback).
3. **Heywood Ian, Cornelius Sarah et aln.,** An introduction to Geographic Information Systems, Pearson education, 2006 (ISBN 81-7758-784-6).
4. **Michael Worboys & Matt Duckham,** GIS A Computing Perspective, CRC press , Second Edition, 2004 (ISBN 0-415-28375-2)