III Year I Semester	**L**	**T**	**P**	**C**
Code: 17CE513	**0**	**0**	**3**	**2**

GEOGRAPHICAL INFORMATION SYSTEM LAB

Course Objectives:

1. Know how to do pre-processing and digitization of a Toposheet
2. To know how to create thematic maps and Layout preparation
3. To know how to estimate features like length, area etc.,
4. To know how to generate DEM and there by volume calculation for hills/tanks.
5. To know the data base creation for road network analysis and Watershed delineation in
6. Water resources applications

Course outcomes:

1. Pre-process the image/toposheet and digitize the features
2. Create thematic maps and prepare layouts for the analyzed data
3. Estimate features like length, area etc
4. Generate Digital Elevation Model and calculate the volume for hills/tanks
5. Create data base and delineate of watershed boundary.

Experiences:

1. Preprocessing of the image / toposheet (which includes Georeferencing, Projection and Subset)
2. Digitization of Features from the Toposheet
3. Topology of digitized of features
4. Study of features estimation
5. Creation of Thematic maps.
6. Layout Preparation.
7. Digital Elevation Model.
8. Calculation of volumes for Hills and Tanks.
9. Database creation for Road Network analysis.
10. Delineation of watershed boundary.
11. Mosaic of dataset.
12. Clip/Subset of dataset.

Software:
rcGIS 10X
ERDAS Imagine 10.4.1
Any one or Equivalent.

Textbook :

1. Concept and Techniques of GIS by C.P.L.O. Albert, K.W. Yong, Prentice Hall Publishers.