

IV Year – I SEMESTER

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CE806-GIS & CAD LAB

Lecture :	--	Internal Assessment :	30 Marks
Tutorial :	--	Semester End Examination :	70 Marks
Practical :	3 hrs/Week	Credits :	2

Course Learning Objectives:

The course is designed to

- introduce image processing and GIS software
- familiarize structural analysis software
- understand the process of digitization, creation of thematic map from toposheets and maps.
- learn to apply GIS software to simple problems in water resources and transportation engineering.
- learn to analyse 2 D and 3D frame steel tubular truss using structural analysis software.
- learn to analyse and design retaining wall and simple towers.

Course outcomes

At the end of the course the student will be able to

- work comfortably on GIS software
- digitize and create thematic map and extract important features
- develop digital elevation model
- use structural analysis software to analyse and design 2D and 3D frames.
- design and analyse retaining wall and simple towers using CADD software.

GIS:**SOFTWARES:**

- Arc GIS 9.0
 - ERDAS 8.7
 - Mapinfo 6.5
- Any one or Equivalent.

EXERCISES IN GIS:

Digitization of Map/Toposheet

Creation of thematic maps.

Estimation of features and interpretation

Developing Digital Elevation model

Simple applications of GIS in water Resources Engineering & Transportation Engineering.

COMPUTER AIDED DESIGN AND DRAWING:**SOFTWARE:**

STAAD PRO / Equivalent/

STRAAP

STUDDS

EXERCISES:

2-D Frame Analysis and Design

Steel Tabular Truss Analysis and Design

3-D Frame Analysis and Design

Retaining Wall Analysis and Design

Simple Tower Analysis and Design

TEXT BOOK:

‘Concept and Techniques of GIS’ by C.P.L.O. Albert, K.W. Yong, Printice Hall Publishers.

