

# **GEOG-303 GPS and Levelling**

## **I. Introduction to GPS Technology**

- i. Types, Performance and Errors
- ii. Use & Applications

## **II. Levelling**

- i. General description kinds of levels
- ii. Adjustments in levels
- iii. Procedure of levelling
- iv. Methods of calculating reduced levels.
- v. Profiles and longitudinal levelling
- vi. Cross sectional levelling
- vii. Accuracy required in leveling operation.
- viii. Advantages and sources of error in leveling procedure.
- ix. Contours by clinometers
- x. Tangent scale clinometers use with Plane Table laying out of contours

### **Books recommended:**

- Maginr D. J (1991): Geographic Information System. Longman London
- Brinker R.E. & W.C. Taylor (1962): Elementary Surveying, The International Textbook Company.
- Usili G.W. (1960): Practical Surveying. The Technical Press Ltd.
- Clendinning, J. (1960): Principles of Surveying. Blackie and Sons, Limited Glasgow,
- Rubey, H. et .al (1958): Engineering Surveys. The Macmillan Company.
- Breed, C.B. & G.L. Hosmer (1953): Surveying. John Wiley & Sons.
- Thomas W.N. (1942): Surveying, John Wiley and Sons.
- Kanetkar, T.P. & S.V. Kulkarni (nd): Surveying and Leveling part-I. Union Book Stall Karachi.