

SEMESTER 1st
SKILL ENHANCEMENT COURSE
GGY122S GEOGRAPHY (FUNDAMENTALS OF REMOTE SENSING)

CREDITS 2+2

***Course Outcome:** This course provides the necessary skills, aptitude and trainings to the students in various geospatial technologies. It prepares the students adequately in different techniques of image interpretation and analysis. The practical course provides hands on exposure to our students in various remote sensing and GIS software. The student is professionally well equipped to work independently or in team for providing solutions to problems in a GIS environment*

THEORY (02 CREDITS)

UNIT – I

1. Remote Sensing: Concept, History and Development
2. Types of Remote Sensing (Active and Passive)
3. EMR and Atmospheric Interaction
4. Platforms and Sensors

UNIT – II

1. Elements of Image Interpretation
2. Remote Sensing Data Products and their Procurement
3. Aerial Photographs and their Types
4. Concept of Digital Image Processing (DIP)

PRACTICAL (02 CREDITS)

UNIT – III

1. Overview of Image Processing Software's
2. True Colour and False colour Image composition
3. Visual/Digital Interpretation of Aerial Photographs & Satellite Images.

UNIT – IV

1. Data Preparation (Layer Stacking, Mosaicking and Subset)
2. Image Enhancement (Histogram Equalization and Contrast Stretching)
3. Image Classification (Supervised and Unsupervised)

REFERENCES

1. Campbell, J.B., Introduction to Remote Sensing, (2nd ed.), Taylor and Francis, London, 1996.
2. Curran, P., Principles of Remote Sensing, Longman, London, 1985.
3. Fazal S., Remote Sensing Basics, Kalyani Publishers, New Delhi, 2009.
4. Jenson, J.R., Remote Sensing and Environment. Pearson India, 2013.
5. Joseph George., Fundamentals of Remote Sensing, (2nd ed.) University Press, Hyderabad, 2005.
6. Lillesand T.M and Keifer R.W., Remote Sensing and Image Interpretation (6th ed.) John Wiley and Sons, New York, 2008.