

Introduction to Remote Sensing Workshop Agenda

Description: Remote sensing plays a large role in geospatial analysis and the enhancement of geographic information systems. This course provides students with the knowledge and practical experience necessary to develop a thorough understanding of the basic principles, techniques and applications of remote sensing. Students will learn about digital image acquisition, processing, display and analysis with a focus on environmental monitoring and natural resource management. Emphasis is placed on the use of digital satellite image data. Topics include basic air photo interpretation, the electromagnetic spectrum, spectral response curves, sensor and image characteristics, image display, image transformations, image classification and data acquisition. Class format: approximately 50% lecture, 50% lab exercises.

Day 1

- Lecture 1: Overview: What is Remote Sensing and How is it Used?

- Lecture 2: The Basics of Air Photo Interpretation
- Hands-on Training: Manual Air Photo/Satellite Interpretation

- Lecture 3: The Electromagnetic Spectrum and Spectral Response Curves

- Lunch Provided (1 hr)

- Lecture 4: Sensors and Image Characteristics (spatial, spectral, temporal)
- Hands-on Training: Introduction to ENVI and Spatial Resolution

- Lecture 5: Multispectral Image Display
- Hands-on Training: Image Display and Spectral Response

Day 2

- Lecture 7: Image Transformations
- Hands-on Training: Computing the Normalized Difference Vegetation Index

- Lecture 8: Image Classification, Part 1
- Hands on Training: Manual Classification and Supervised classification

- Lunch Provided (1 hr)

- Lecture 9: Image Classification, Part 2
- Hands on Training: Unsupervised classification

- Lecture 10: Data Acquisition
- Hands-on Training: Acquiring and Importing Satellite Imagery