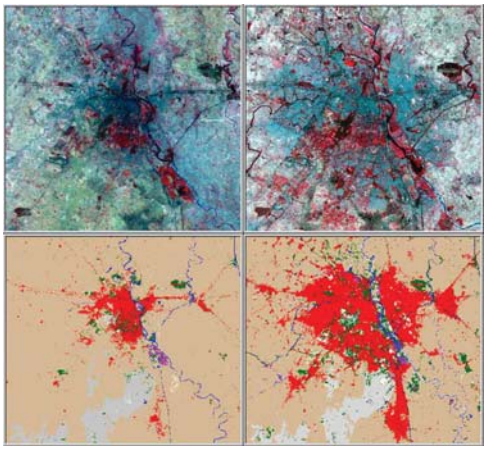
COURSE TITLE: PATTERN RECOGNITION USING REMOTELY SENSED PHOTOGRAPHY
COURSE NUMBER: CP6531
TERM: Spring 2008
INSTRUCTOR: Faust | Sahar
SEATS: 15



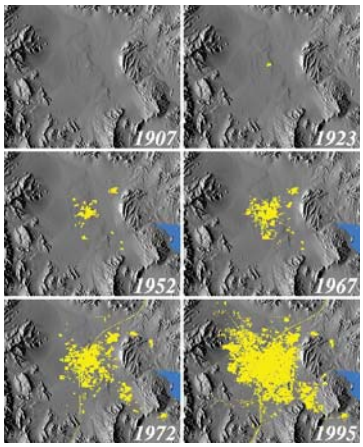
Multispectral Remote Sensing information (imagery) from aircraft or satellites provides one of the most important data sources for analysis. When adequately processed and analyzed, Remote Sensing images can be used in a Geographic Information Systems (GIS) to do the following:

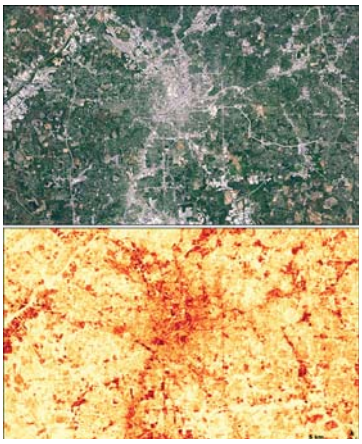
- Produce land cover and vegetation maps
- Identify environmental degradation
- Assess rapid change in urban and rural landscapes, and
- Analyze the potential for resource exploration

Applications for Remote Sensing analysis are used by City and Regional Planners, Earth and Atmospheric Science practitioners, Computer Scientists, and many other disciplines. Techniques used for accurate correction and pattern recognition of multispectral imagery are not usually available in traditional GIS systems; however, connections between image processing and GIS systems are becoming more robust.

This class is very interactive in nature, and will require "hands on" analysis of multispectral and hyperspectral imagery using state of the art image processing and GIS software in a GIS lab. History and theory of Remote Sensing systems will be discussed along with methods and sources for Remote Sensing data. Techniques for the accurate processing of Remote Sensing data into maps that can be directly incorporated into GIS analyses will be presented and used throughout the class. Detailed experience in data acquisition, geometric correction, image enhancement, supervised and unsupervised image pattern recognition, and map product generation will be gained while working with satellite and/or aircraft images. Research reports will be developed using Library and Web resources and presented in class. A final project is required using techniques discussed and demonstrated in class and students will leave the course with a real product for their portfolios.

It is expected that after taking this class, a student will be able to understand the basics of Remote Sensing, and be able to incorporate the techniques of Remote Sensing analysis into his/her field of study or profession.





You won't learn it if you don't do it – touch it, use it, understand it.

Set Your Direction