



GEOG 4530/5530 Digital Image Processing and Analysis

Credits: 3 hours

Who should take? If you are interested in:

- Landscape mapping
- Environmental change detection
- Ecosystem monitoring

What can I achieve? Some examples demonstrating what you can achieve after the completion of this course:

- Map vegetation types for habitat conservation
- Track the growth of a city and changes in farmland over several years
- Are water bodies shrinking over decades?

What will be covered: This course introduces the principles and practices of photo interpretation and remote sensing primarily for use in environmental monitoring. **Prerequisite is Intro GIS or equivalent courses.** The course will emphasize on hands-on practices. Topics will include: backgrounds of image acquisition and photo interpretation, introduction to airborne and common satellite systems, image enhancement, land cover type classification, post-classification accuracy assessment and landscape change detection will be covered. **This course can be counted as a required Special Topics course towards the GIS certificate.**

Instructor: John South is a Lecturer in the Geography Department. He received his bachelor degree at Purdue University where he studied history, computer science, and mathematics. He then received an MBA from the University of Dallas and a master degree in GIS from Penn State University. He is currently working on his Ph.D. at UNT. His research interests extend to remote sensing and LiDAR, and their applications in geospatial science, environmental health, natural resources, and landscape ecology. John is also the faculty advisor for the BS GIS+CS degree.

