Remote Sensing and Geographic Information Systems (EESC03)

Winter 2009

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This course focuses on the use of Geographic Information Systems (GIS) and Remote Sensing (RS) for solving a range of scientific problems in the environmental sciences and describing their relationship with and applicability to other fields of study (e.g. geography, computer science, engineering, geology, ecology and biology). Topics include (but are not limited to): spatial data types, formats and organization; geo-referencing and coordinate systems; remotely sensed image manipulation and analysis; map production.

Lecture Topics (Tentative listing)

- What is a GIS?
- Maps, Raster GIS
- Coordinates & Sampling Procedures
- Data Input and GIS
- Vector GIS, Vector/Raster Debate
- Spatial Interpolation; Remote Sensing In GIS
- Interaction of EM with the Earth’s surface
- Aerial Photography Data Collection
- Satellites and Image Processing

Reference Material:


Grading

- Labs (3 Total - Late assignments are penalized 10% per day):
  January - 10% (due January 19 and February 2)
  February - 15% (due February 16 and March 2)
  March - 15% (TBA)
- Midterm Test: 20% (February 23)
- Final Exam: 40%

Lecture Time (S221)
Monday 3-5pm

Tutorial Time (B469)
Monday 7-9pm

Office Hours (S410E)
Monday 5-7pm