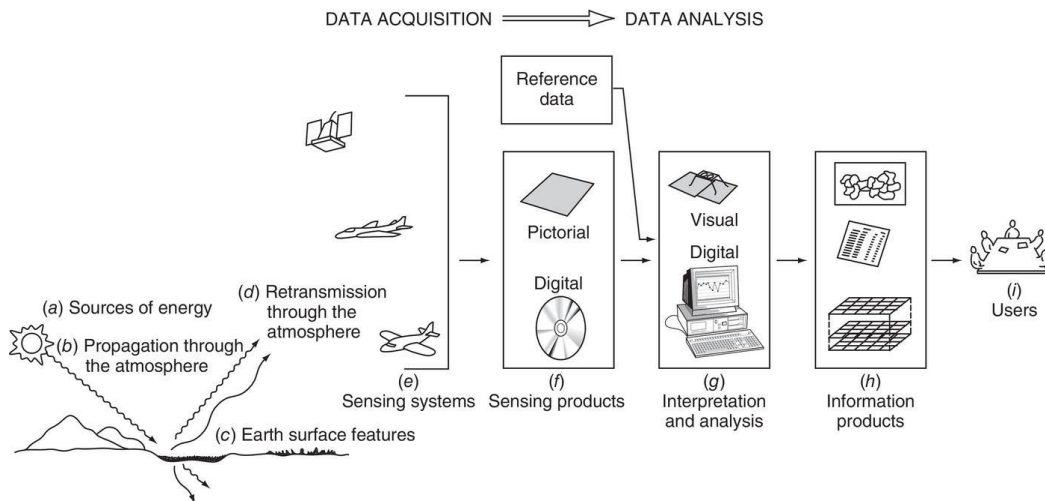


Geoscience Applications of Remote Sensing

Geos 422, 3 Cr., Fall 2018



Course overview:

This course introduces the techniques and applications of remote sensing. It has an equal emphasis on the (1) physics of remote sensing, (2) digital image processing, and (3) applications of remote sensing. Methods taught are applicable to a wider range of fields, such as natural resources management, biosciences, and engineering.

Topics:

- Fundamentals of remote sensing
- Selected image processing methods
- Processing of multispectral images including image classifications
- Thermal remote sensing
- Remote sensing applications in the geosciences

Student Learning Outcomes: Successful completion of the course will allow students to

- *Assess* how airborne and satellite images may help solve a specific problem
- *Identify* appropriate remote sensing and geospatial data set pertinent to the problem
- *Search , order/retrieve and, import* remote sensing data relevant to the problem
- *Analyze and interpret* the spectral signatures in the remote sensing images
- *Design* an workflow that builds on the concept of image-processing chain to move from raw image to a quantitative representation of information contained in the image
- *Synthesize* quantitative information obtained from processed remote sensing data into a report or product that addresses a specific problem
- *Communicate* the results of such work effectively in oral and written form

Time: MW 1 – 2 pm; W 2:15 – 5:15 pm

Place: Image Processing Lab, West Ridge Research Building (WRRB), Room No. 004

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