

Practical Applications of Remote Sensing in Agriculture and Natural Resources

Geography and Agronomy 419/819 / Natural Resources 420/820

Fall Semester, 2011

Credit Hours: 4

Course Description: An introduction to the practical uses of remote sensing in dealing with various agricultural and natural-resources issues. Selected case studies detailing real-world projects and applications are presented and discussed. Emphasis is given to imaging sensors of high spatial resolution and those that operate in the visible, near-infrared, mid-infrared portions of the electromagnetic spectrum. Digital analysis of image datasets is also emphasized. The approach to the course is problem-based learning, with a focus on practical solutions.

Prerequisite: Introduction to Remote Sensing (or equivalent or permission).

Class Format: Lectures, demonstrations, discussion, lab exercises

Meeting Time for Lectures: Monday, Wednesday, and Friday at 9:00 to 9:50 AM

Meeting Time for Labs: 12:30-2:50 pm Thursday or 2:00-4:45 pm Friday. Please note that you must be registered for one of these. The T.A. will discuss the details of the lab sessions with you.

Instructor:

Dr. Donald C. Rundquist
Professor, Faculty of Geography
Research Scientist, Center for Advanced Land Management Information Technologies (CALMIT)
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Lab Instructor:

Mr. Andy Boateng, PhD student
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Email aboateng2@unlnotes.unl.edu for consultation appointment

Text:

None; outside readings (journal articles) are required for project development

Grading System:

Three exams (15% each) = 45%
Group applications project = 30%
Lab exercises (8) and image analysis proficiency test = 20%
Class participation and attendance = 5%