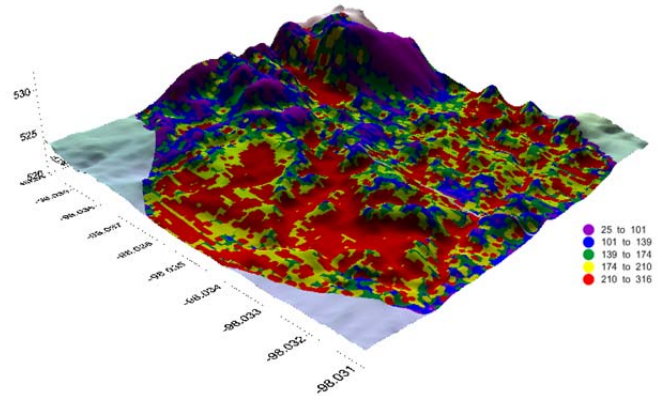


Spatial Variability in Soils

AGRO 831
Spring 2012 (2 credits)



Course Syllabus

Description. This course will examine the basic concepts of soil spatial variability – it's underlying causes and impacts soil variability has on management, primarily for crop production. Students will become familiar with geographic and geostatistical concepts used in describing and measuring spatial variability. They will learn how to access and use information sources about soil spatial variability, as well as how to create spatial data themselves. Students will also be introduced to approaches on the use of spatial information for more profitable crop production.

Teaching Objectives:

- Define what spatial variability means and why it is important.
- Evaluate when variability is manageable and when it is not.
- Identify sources and scales of variability.
- Identify both public and self-generated spatial information resources.
- Use spatial tools, GPS & GIS, to summarize and analyze data.
- Collect data and analyze it to quantify variability.

Instructors:

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Grading. Continuing education units (CEU) for certified crop consultants are available on request. You will be graded on bi-weekly homework assignments given in Blackboard, including discussion board communications. Four assignments will be given, starting Feb. 13, collectively worth 60 points. You will complete a paper over a spatial soils topic of interest to you, with instructor consultation, worth 30 points. Topics will also be provided for on-line interactive discussion among students, worth 10 points. Your grade will be based on 100 total points. The letter grade will be assigned using the following scale:

96 - 100: A+	92 - 95: A	88 - 91: A-	
84 - 87: B+	81 - 83: B	78 - 80: B-	
74 - 77: C+	70 - 73: C	67 - 69: C-	
64 - 66: D+	60 - 63: D	57 - 59: D-	<57: F

Course Schedule:

Workshop

An optional workshop will be held February 3, 2012, from 8:30 AM to 4:30 PM, in 262 Keim Hall, UNL East Campus, Lincoln, NE. There is a cost of \$30 for workshop attendance for students taking the course for credit, to cover refreshment and meal expenses. Resident students are encouraged to attend the workshop, but presentations will be archived on the course Blackboard site for review by both resident and non-resident students. Workshop presentations are the primary teaching method for the course, and assignments will be based on material covered in workshop presentations.

Narrated workshop presentations will be available for review on the course Blackboard site starting February 3.

Assignments

Assignment	Topic	Post Date	Due Date	% of Course Grade
1	Sources & Scales of Variability	Feb. 13	Feb. 22	10
2	Sources of Spatial Information	Feb. 27	Mar. 7	15
3	Quantifying Spatial Variability	Mar. 12	Mar. 26	20
4	Spatial Analysis Tools & Profit	Mar. 28	Apr. 9	15
Paper	Consult Instructor on Topic		Apr. 20	30
Interactive On-line Discussion		Starts Feb. 13		10