

Quiz 1 Friday Sept. 15 approx. 20 points

Test 1 Friday October 6 approx. 100 points

Format: The quiz and test will be a mix of multiple choice, fill-in-the-blank, short answer AND applied knowledge 'lab' exercises. Test questions can come from: Lectures and lecture slides, textbook readings, handouts, labs, field trips and our soil discussions.

Testable Content

1. Concepts of Soil Genesis and Geomorphology (Buol et al. Chapter 1 and Syllabus)
 - a. Be able to describe where these two concept sets overlap.
2. Soil importance factors related to interactions with humanity and the Earth's ecosystems. (Class and Nobel Conference Soil Videos)
3. Know how to access soil data either from books OR digital resources.
4. History of soil science (Chapter 1 and Handout)
 - a. Know the current organizations that lead soil survey work, e.g. NRCS and Soil and Water Conservation Districts (SWCD).
 - b. People may show up in multiple choice or be able to place them accurately in a short-answer question.
5. Soil morphology
 - a. Know and be able to use all soil morphology factors.
 - b. Be comfortable characterizing soil morphology factors in a core.
 - c. Know how to use the Munsell Soil Color guide.
 - d. Be able to hand texture and use a ternary diagram to define a soil's texture.
6. Soil horizons
 - a. Know the Master horizons
 - b. Know the Subordinate horizons common to the Midwest
 - c. Be able to use these descriptive factors in a soil core
 - d. Be able to use these descriptive factors in an Official Soil Description
7. Soil orders, for each of the 12 orders know:
 - a. Geography, coverage, Key development/weathering factors
 - b. Pedogenic processes and Common Horizons
 - c. Use
 - d. Classification
 - e. Perspective
8. Field work interpretations
 - a. Be able to combine your developing knowledge with field observations.
 - b. Be able to discuss soil forming factors and geomorphic factors to sites visited.
9. Soil taxonomy – This will take awhile to develop, but for test one you should
 - a. Know the objectives, practical aspects and reasons for soils classification
 - b. Steps to classify a soil through soil taxonomy.
10. Soil classification, mapping and soil surveys.
 - a. Know the history of a soil survey.
 - b. How soil surveys are constructed.
 - c. What information is included in a soil survey
 - d. How to apply soil survey knowledge to 'real world' soil use issues.

*Note: We are moving the content scheduled in the Syllabus Week four to Test 2.