Syllabus

CSES 3114 - Soils -- Fall Semester, 2005

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Catalog Description

Characterization of soils as a natural resource emphasizing their physical, chemical, mineralogical, and biological properties in relation to nutrient availability, fertilization, plant growth, land-use management, waste application, soil and water quality, and food production. For CSES, ENSC, and related plant- and earth-science majors. Partially duplicates 3134. Pre: Chem 1036, Junior standing. Co: **3124 is mandatory**! (3H, 3C) I.

Educational Objectives

Having successfully completed this course, the students will be able to:

1. Describe the genesis and classification of soils.
2. Relate physical, chemical, and biological properties of soils to nutrient availability, fertilization, and plant growth.
3. Define and understand the role of soils in important ecosystem functions such as carbon and nutrient cycling, water quality regulation, habitat support, etc.
4. Apply the knowledge gained to select proper land-use management practices that will promote food, plant, and animal production; prevent soil and water pollution and soil deterioration in general; and enhance the quality of life through landscape design.

Grading Criteria

Final grades will be assigned based on your cumulative grade on quizzes and a final exam. Grades will be adjusted (curved) when necessary to conform to the regular A-B-C-D-F system.

4 Quizzes	75%
Final Exam	25%

Required Texts

Brady, N. C. and R.R. Weil. *The Nature and Properties of Soils*. 2002. Prentice Hall, 13th Edition. 960 p.
Also Recommended: *Laboratory Manual*, Available from Virginia Tech Bookstore.

Basic Soils Web Site: Go to ***Blackboard*** from Tech Homepage; click on Course Catalog, Ag. & Life Sciences, Click on "Soils", enter PID/Password)

Soils Lab Web Site: http://soils1.cses.vt.edu/MJE/intro_soils/

Any student with special needs or circumstances should feel free to meet with W.L. Daniels.

THE HONOR CODE WILL BE STRICTLY ENFORCED IN THIS COURSE. ALL ASSIGNMENTS SUBMITTED SHALL BE CONSIDERED GRADED WORK, UNLESS OTHERWISE NOTED. ALL ASPECTS OF YOUR COURSEWORK ARE COVERED BY THE HONOR SYSTEM. ANY SUSPECTED VIOLATIONS OF THE HONOR CODE WILL BE PROMPTLY REPORTED TO THE HONOR SYSTEM. HONESTY IN YOUR ACADEMIC WORK WILL DEVELOP INTO PROFESSIONAL INTEGRITY. THE FACULTY AND STUDENTS OF VIRGINIA TECH WILL NOT TOLERATE ANY FORM OF ACADEMIC DISHONESTY.