

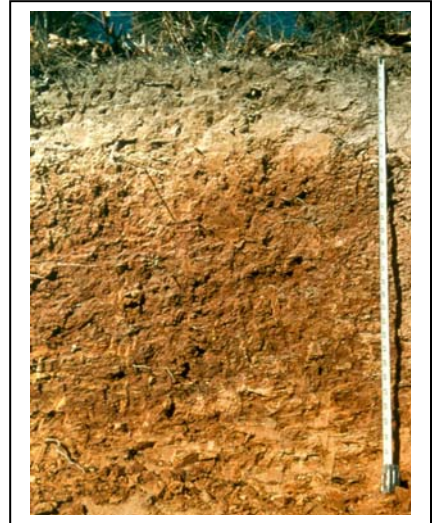
An Introduction to Basic Soil Science with Field Exercises

April 2nd and 3rd, 2009

**Virginia Transportation Research Council
Charlottesville, Virginia**

Sponsored By:

**Virginia Association of Professional Soil Scientists (VAPSS)
Virginia Tech Dept of Crop & Soil Environmental Sciences**



This intensive two-day short course focuses on understanding soil physical, chemical and morphological properties in natural and managed landscapes. The course will stress relationships among basic soil properties, water quality, and various land-use issues. Day one will focus upon understanding soil formation, morphology and other properties essential to managing soils for various uses. Day two will stress practical applications of soil science including understanding and utilizing soil maps and dealing with problematic materials (urban and acid sulfate soils). The course will finish up with a 3-hour practical field soil description session at Va Tech's Northern Piedmont Agricultural Research & Extension Center in Orange.

Instructors: *W. Lee Daniels and others*

W. Lee Daniels is a Professor of Soil Environmental Science at Virginia Tech. He has taught basic soils, and other related soil-environmental courses Virginia Tech for over 20 years. His research and outreach programs include mined reclamation, wetland restoration, land-application of wastes, right-of-way management, and manufactured soils. Dr. Daniels has cooperated in research-demonstration programs with Australia, Brazil, China and Poland. Other faculty/staff from Virginia Tech will assist.

Location, Fees and CEUs:

The course will be offered at the Virginia Transportation Research Council's main auditorium. The VTRC is located at 530 Edgemont Road in Charlottesville on the UVa Campus. Go to: <http://vtrc.virginiadot.org/MAP.aspx> for directions. Assistance with lodging is available; contact Sue Brown (see below).

The fee for the two-day short course is \$235 which includes the mandatory CEU fees (\$35) to Virginia Tech for issuance of 1.6 CEUs, continental breakfast and coffee/snack breaks each day, and duplication of hard copy (black & white) and CD (color) versions of all teaching materials and slides. Registration deadline is March 27th, 2009. Registration will be limited to 50 attendees. This course will be offered again in October (2009) if you are unable to register for these dates.

For Further Information:

Sue Brown – 540-231-5741 – suebrown@vt.edu

W. Lee Daniels – 540-231-7175 – wdaniels@vt.edu

Thursday, April 2nd - Basic Soil Science

<u>Time</u>	<u>Topic</u>
8:00 am	Registration and Continental Breakfast
8:30	Introduction to Soils and Soil Forming Factors
9:00	Basic Soil Morphology; Profiles and Horizons
10:00	Coffee/Snack Break
10:15	Virginia Soil - Parent Material – Geologic Relationships
11:45	Lunch (on your own)
1:00 pm	Soil Physical Properties – Texture/Structure/Density
2:15	Soil Water Relations - Basics
3:00	Refreshment Break
3:15	How Water and Solutes Move in Soils
4:00	Soil Mineralogy and Sources of Charge
5:00 pm	Wrap-up questions and adjourn

Friday, April 3rd – Applications and Field Description of Soils

<u>Time</u>	<u>Topic</u>
8:00 am	Continental Breakfast and Conversation
8:30	Soil Chemical Properties – Charge/Acidity/Fertility
9:45	Soil Biology and Organisms
10:15	Soil Redox Process and Soil Color Patterns
10:45	Coffee/Snack Break
11:00	Basics of Soil Classification
11:45	Understanding Soil Maps
12:15 pm	Acid-Sulfate, Urban and Other Problem Soils
1:00	Wrap-up questions and Coffee/Snack Break
2:30	Reconvene at Northern Piedmont AREC in Orange (Maps provided) Basics of soil observation; soil pits vs. augers vs. probes Delineation of soil horizons Description of soil color, texture, structure and horizon boundary Description of redoximorphic features (Intro to Hydric Soil Indicators) Determination of intact soils vs. cut-fill materials Soil toposquence concepts
5:30 pm	Adjourn

Notes: Friday afternoon program will be held regardless of weather. In case of very wet conditions, augered soil profiles from the local area will be brought under cover for description and discussion. Virginia Tech will provide all equipment, forms and reference materials needed. Attendees should come dressed for field work. Virginia Tech will provide transportation to/from Orange for a limited number of attendees on a first come first reserved basis.

Registration Form

VAPSS and Virginia Tech

April 2 and 3, 2009

**An Introduction to Basic Soil Science
1.6 CEUs**

PLEASE PRINT CLEARLY OR TYPE:

Name _____

Work Phone _____

Firm/Org. _____

Fax _____

Address _____

E-mail: _____

City _____

State _____ **Zip** _____

Amount enclosed \$ 235⁰⁰

Registration deadline is March 27, 2009. Registration maximum is limited to 50 attendees.

Contact Sue Brown (540-231-5741; Fax: -7630; suebrown@vt.edu) for credit card payments

(Mastercard or Visa only). Payment must be made prior to the meeting to assure seating space.

No cancellations/refunds after March 27. All cancellations subject to \$25 processing fee.

Make checks payable to VAPSS

Mail check with registration form to:

**Sue Brown
VAPSS
Virginia Tech/CSES
238 Smyth Hall - 0404
Blacksburg VA 24061-0404**