

Course Description

Soil Morphology and Mapping (PLNTSOIL 597T)

Instructor: Peter C. Fletcher

Upon completion of this course, participants will be proficient in describing, documenting, and interpreting a broad spectrum of soil conditions on different New England landscapes. There are 7 class sessions and each is held at a different location throughout Southern New England (CT, MA, and RI). Classes typically meet every other week and alternate between Fridays and Saturdays. Each class session begins with a 2 hour lecture that is followed by 4 hours of field exercises.

Key to the continuing success of this course is the field site locations. Each emphasizes a different New England landscape with unique landforms and varied soil conditions. Participants will be given instruction on how to read landscapes and understand the geologic processes that formed them. Landscapes visited during this course will include: glacial till (moraines, drumlins, etc.), glacial outwash (outwash plains, eskers, kames, kettles, etc.), glacial lakebed silts and clays (varved deposits, deltas, etc.), alluvial (floodplain, meander scars, etc.), organic deposits (kettle bogs), and marine sediments (sand dunes, beaches, and tidal marshes).

Participants will gain valuable field experience and will become proficient at:

- Describing soil profiles, and identifying soil horizons and layers;
- Estimating soil textures, percent sand, silt, and clay;
- Documenting soil colors using the Munsell Color Book;
- Interpreting depth to seasonal high water table using redoximorphic features; and
- Describing soil structure and consistence.

Other topics covered will include hydric soil identification and describing a deep observation hole for soil evaluation.

For those qualified, this course is offered as either an undergraduate or graduate level course.

Participants will be expected to:

- Research and study available reference materials prior to each class session
- Maintain a field notebook documenting the field exercises
- Complete a field project that is relevant to their work and/or interests

This course is offered every Spring Semester through the Department of Continuing Education at the University of Massachusetts in Amherst, MA. For information on how to register for this course contact Sue O'Neil at the UMass, Dept. of Continuing Education (413-545 2484).