

**EPSc 413 Introduction to Soil Science**  
**Schedule and Instructions for Field Trip to Tyron Research Center**  
**April 1, 2017**

**8:30 am:** Depart Wash U from parking lot east of Rudolph Hall (in front of Whitaker Hall).

**9:15 am:** Arrive at Tyson. Quick break, ready equipment for the field.

**9:30 am:** Work at Site 1

*Site 1:* This site is designed to familiarize you with soil profile characterization. We will need to partially re-excavate this site, which was originally dug using a backhoe. At this site you should look for changes in color and texture with depth. This site may show some very subtle changes through the profile, so be prepared for careful scrutiny. ***You should record the information needed to construct a basic soil profile description, including the color and texture of the soil horizons you identify and the range of depths to each horizon. Also note the structure and other distinctive features, like root abundance, coatings on peds, and the nature of boundaries between horizons.*** We will discuss this profile during lunch.

**11:00 am:** Work at Sites 2, Part 1

*Site 2:* Here we will examine soil profiles along a transect down a slope. A road has been cut through this area. We will examine 4 sites on the southwest side of the road and 2 sites on the northeast side. The class will break up into 6 groups of 2-3 students. Prof. Catalano will identify the locations to examine. Each group will be responsible for digging out a soil pit 1 to 2 feet deep and then describing the soil. There is no need for excessive detail. Determine the major horizons present, their depths (measure these!), and, if you have time, their texture.

**12:00 pm:** Lunch and discussion of the soil at Sites 1.

**1:00 pm:** Work at Sites 2, Part 2

*Site 2:* After lunch, the same groups will reform and will then spend 1 hour rotating among the other 5 soils pits, noting brief descriptions of soil horizons, their thickness and (if possible) texture, and other diagnostic features. The groups will then discuss a possible explanation for the soil forming process that produced the soil profiles seen along the transect.

**2:00 pm:** Work at Sites 3 and 4. The class will split into two groups and then switch after 30 minutes.

*Site 3:* Examine O horizon accumulations in the forest soil at this site on the ridgetop. Specifically investigate the soil organisms present, including fungi (look for white, yellow, or orange hyphae) and worms, and the nature of soil OM on the soil surface.

*Site 4:* Compare the soil profiles on two sides of the ridge, one south-facing, the other north-facing, to investigate the role of aspect on soil development. Dig small soil pits and note how the soil properties vary between the two sides of the ridge.

**3:15 pm:** Final discussion of observations at Sites 2, 3, and 4

**4 pm:** Depart Tyson for Wash U