

Landscape Technology SAC
Contact: Elizabeth Brewster, SAC chair
Sample Project, Critical Thinking and Problem Solving

Below is a project that is assigned in the Soils and Plant Nutrition class as part of the Landscape Technology Program. The project requires critical thinking and problem solving in the course of analyzing a sample of soil. Students will collect and then perform tests on the soil sample as stated below. Finally, students will make a presentation of their findings and recommendations to the class.

CSS 200 - SOILS and PLANT NUTRITION - PROJECT GUIDELINES

Each of you will be given a site plan for a site here on campus. You will also be given (or will have to measure) square footages of areas from the site plan. As a group of 5-6 students, you will gather samples and produce data for each **Soil Management Unit** determined by your group. Data from each group will be analyzed, calculations made and written into a report. Each group will make a 15-20 presentation of their findings to the classroom on the due date.

As a group you are to prepare a Soil Management and Fertilization Report as if for a client. That report will be typed and follow the format below:

- **Report Title & Authors**
- **Description of Site** – (where site is located, the topography of the site, etc.)
- **Soil Management Units** – (using your site plan, outline soil management areas, list by Roman numeral with a brief description and rationale for creating as a unit, **minimum of three units for report**)

For each Soil Management Unit:

1. **Description of Soil** - (A description of physical properties of the first 6" of soil - i.e., permeability, consistency and color)
2. **Soil Test Results** - (texture, humus, pH, N, P, K, Ca, and Mg)
3. **Recommendations for Fertilization** (specific type of fertilizer or amendment, fertilizer ratio, fertilization rate (pounds / 1000 square foot), frequency per year and when to apply, actual pounds of fertilizer / application for area in soil management unit)
4. **Recommendations for Soil Management** (soil organisms, mulch, avoiding compaction, mowing, etc.)

- **Summary of your findings**

Alternatively, your group could substitute 1-2 SMU's above for your own landscape soil sample(s) For this option, a full description of the site (location of the site, topography, etc.), and photos of the site must be included. If you select this option, you are responsible for all the measuring of areas and sampling required for making a full report for your own SMU. **This option does not allow the student to opt out of field and lab testing for the group soil sampling above.**

Student Names

Soils Presentation and Report Grading Guidelines:

- Have you made a complete description of the site and included your **rationale** for dividing into soil management units? (10 pts.)

- For each unit, have you included a complete description of the physical soil properties and listed all your test results? (40 pts.)

- Interpretation of the results and recommendations for soil management units (30 pts.)

- Quality and Clarity of Presentation: (10 pts.)

- Quality and Clarity of Report: (10 pts.)

Project Grade _____

Comments: