

# Common Course Outline

## ENVS 136

### Soil Science and Conservation

3 semester hours

## The Community College of Baltimore County

### Description

Soil Science and Conservation

Exposes students to the nomenclature, methods and standards of soil science as it is applied in environmental practice; covers how to identify and delineate soil types, investigates soil morphology and ecology, and explores management and restoration techniques.

Prerequisite: ENVS 101 or permission of program coordinator

### Overall Course Objectives

Upon successful completion of ENVS 136, a student will be able to:

1. Understand and apply the terminology and principles of soil science.
2. Describe the relationships between natural and human activities and the soil in a historical and contemporary context.
3. Relate soil conditions to land use decisions and management practices.
4. Solve problems with the application of best management practices and the supporting principles.
5. Discuss issues concerning problems of soil health, soil conservation and environmental practices.
6. Use the technical skills associated with soil science including but not limited to reading topographic maps, using the U. S. Geologic Survey soil survey and its various components.
7. Understand and describe the engineering and productivity limitations of soils.
8. Employ a practical working knowledge of soil characteristics and engineering principles.
9. Read and understand a typical boring log.
10. Design basic erosion and sediment controls using state of the practice methods and materials.
11. Utilize fundamental field tests and soil descriptions.

### Major Topics:

Soil as a Medium for Growth

Formation of Soil, Regolith, Soil Genesis

Physical Properties of Soil

Soil Surveys: Survey Interpretation

Geography of Soils

Global Distribution of Soils

Soil Water

Soil Water Management

Ecology of Soils

Organic Matter

Tillage and Traffic Effects On Soils

Soil Erosion

Soil Chemistry

Plant-Soil Relationships

Soil Taxonomy

Soil and Land Use

## Land Use and Environmental Planning

### **Course Requirements**

Grading procedures will be determined by the individual faculty member but may include written or oral exams, completion of written assignments or papers, and participation in class discussion and group activities.

### **Other Course Information**

ENVS 136 serves as an elective in the A.A.S. degree and certificate programs in Environmental Science and Technology.

Date Revised - 9/15/00