EVSP311

STUDENT WARNING: This course syllabus is from a previous semester archive and serves only as a preparatory reference. Please use this syllabus as a reference only until the professor opens the classroom and you have access to the updated course syllabus. Please do NOT purchase any books or start any work based on this syllabus; this syllabus may NOT be the one that your individual instructor uses for a course that has not yet started. If you need to verify course textbooks, please refer to the online course description through your student portal. This syllabus is proprietary material of APUS.

Course Summary

Course : EVSP311 **Title :** Soil Science
Length of Course : 8 **Faculty :**
Prerequisites : SCIN138, CHEM133, SCIN131 **Credit Hours :** 3

Description

Course Description:

A fundamental study of soil properties and reactions critical to the evaluation of how contaminants, as well as essential nutrients, behave in the soil environment. Interactions of potential pollutants with soils and the aquatic and atmospheric environments are emphasized. Methods of soil management or remediation to minimize pollution are presented. (Prerequisites: CHEM133 or SCIN131 and SCIN138)

Course Scope:

This course seeks to introduce students to basics of soils science and contemporary issues in soils science and management. An understanding of basic principles of environmental science, chemistry and/or physics will be helpful in understanding soil science concepts.

Objectives

After successfully completing this course, you will be able to:

LO-1 Define the basic chemical and physical changes which transform rock into soil.

LO-2 Summarize the different soil orders and their characteristics.

LO-3 Demonstrate how and why the physical properties of soil impact certain human activities.

LO-4 Explain how chemicals and nutrients are stored and released from the soil.

LO-5 Utilize soil surveys to analyze how soil properties have changed over time.

LO-6 Distinguish the major categories of soil pollutants and how remediation for these pollutants occurs.

LO-7 Identify how erosion affects the soil and how it can be prevented.

LO-8 Apply your knowledge to assess a current topic in soil science.

Outline

Week 1: Why study soil? Soil Formation & Development

Learning Objectives

LO-1 Define the basic chemical and physical changes which transform rock into soil.

Readings

Weekly Readings & Other Resources

Week 1 Lesson

Assignments

Discussion 1

Week 2: Soil classification Physical Properties

Learning Objectives

LO-2 Summarize the different soil orders and their characteristics.

LO-3 Demonstrate how and why the physical properties of soil impact certain human activities.

Readings

Weekly Readings & Other Resources

Week 2 Lesson

Assignments

Discussion 2

Quiz 1

Week 3: Soil Biota Organic Matter

Learning Objectives

LO-3 Demonstrate how and why the physical properties of soil impact certain human activities.

LO-4 Explain how chemicals and nutrients are stored and released from the soil.

Readings

Weekly Readings & Other Resources

Week 3 Lesson

Assignments

Discussion 3

Quiz 2

Week 4: Soil and Water

Learning Objectives

LO-3 Demonstrate how and why the physical properties of soil impact certain human activities.

LO-4 Explain how chemicals and nutrients are stored and released from the soil.

LO-7 Identify how erosion affects the soil and how it can be prevented.

Readings

Weekly Readings & Other Resources

Week 4 Lesson

Assignments

Discussion 4

Quiz 3

Week 5: Soil and Plants

Learning Objectives

LO-3 Demonstrate how and why the physical properties of soil impact certain human activities.

LO-4 Explain how chemicals and nutrients are stored and released from the soil.

Readings

Weekly Readings & Other Resources

Week 5 Lesson

Assignments

Discussion 5/6 (this is a combine two week long discussion preparing your for your final project - it is worth 2 discussions of credit)

Quiz 4

Week 6: Soil Sampling & Testing Fertilizers

Learning Objectives

LO-2 Summarize the different soil orders and their characteristics.

LO-3 Demonstrate how and why the physical properties of soil impact certain human activities.

LO-4 Explain how chemicals and nutrients are stored and released from the soil.

LO-5 Utilize soil surveys to analyze how soil properties have changed over time.

LO-6 Distinguish the major categories of soil pollutants and how remediation for these pollutants occurs.

Readings

Weekly Readings & Other Resources

Week 6 Lesson

Assignments

Discussion 5/6 (this is week 2 of a two week long discussion in preparation

for your final project) Quiz 5

Week 7: Agricultural & Horticulture

Learning Objectives

LO-3 Demonstrate how and why the physical properties of soil impact certain human activities.

LO-4 Explain how chemicals and nutrients are stored and released from the soil.

LO-6 Distinguish the major categories of soil pollutants and how remediation for these pollutants occurs.

LO-7 Identify how erosion affects the soil and how it can be prevented.

Readings

Weekly Readings & Other Resources

Week 7 Lesson

Assignments

Discussion 7

Work on Soil Survey Project

Week 8: Soil Conservation & Current Issues

Learning Objectives

LO-2 Summarize the different soil orders and their characteristics.

LO-3 Demonstrate how and why the physical properties of soil impact certain human activities.

LO-5 Utilize soil surveys to analyze how soil properties have changed over time.

LO-6 Distinguish the major categories of soil pollutants and how remediation for these pollutants occurs.

LO-7 Identify how erosion affects the soil and how it can be prevented.

LO-8 Apply your knowledge to assess a current topic in soil science.

Readings

Weekly Readings & Other Resources

Week 8 Lesson

Assignments

Evaluation

Grading:

Name	Grade %
Discussions	24.00 %
Discussion 1	3.00 %
Discussion 2	3.00 %
Discussion 3	3.00 %
Discussion 4	3.00 %
Discussion 5 & 6	6.00 %
Discussion 7	3.00 %
Discussion 8	3.00 %
Quizzes	55.00 %
Quiz 1 (Wk2)	11.00 %
Quiz 2 (Wk3)	11.00 %
Quiz 3 (Wk4)	11.00 %
Quiz 4 (Wk5)	11.00 %
Quiz 5 (Wk6)	11.00 %
Final Project	21.00 %
Final Project	21.00 %

Materials

Book Title: Various resources from the APUS Library & the Open Web are used. Links provided inside the classroom in the Content section.

Author: No Author Specified

Publication Info:

ISBN: N/A

Required Readings

See the Content section of the classroom for additional readings and weekly lecture notes

Additional Resources: Please go to the program guides in the APUS Library for additional resources:

- Environmental Science: APUS Online Library

Software Requirements

- Microsoft Office (MS Word, MS Excel, MS PowerPoint) - American Public University System provides Microsoft Office 365 to AMU/APU students and faculty at no cost (check out the Resource Center in the classroom or find it in the Library)
- Adobe Acrobat Reader

Course Guidelines

Citation and Reference Style

- Attention Please: Students will follow the APA Format as the sole citation and reference style used in written work submitted as part of coursework to the University. Assignments completed in a narrative essay or composition format must follow the citation style cited in the APA Format.

Tutoring

- Tutor.com offers online homework help and learning resources by connecting students to certified tutors for one-on-one help. AMU and APU students are eligible for 10 free hours* of tutoring provided by APUS. Tutors are available 24/7 unless otherwise noted. Tutor.com also has a SkillCenter Resource Library offering educational resources, worksheets, videos, websites and career help. Accessing these resources does not count against tutoring hours and is also available 24/7. Please visit the APUS Library and search for 'Tutor' to create an account.

Late Assignments

- Students are expected to submit classroom assignments by the posted due date and to complete the course according to the published class schedule. The due date for each assignment is listed under each Assignment.
- Generally speaking, late work may result in a deduction up to 15% of the grade for each day late, not to exceed 5 days.
- As a working adult I know your time is limited and often out of your control. Faculty may be more flexible if they know ahead of time of any potential late assignments.

Turn It In

- Faculty may require assignments be submitted to Turnitin.com. Turnitin.com will analyze a paper and report instances of potential plagiarism for the student to edit before submitting it for a grade. In some cases professors may require students to use Turnitin.com. This is automatically processed through the Assignments area of the course.

Academic Dishonesty

- Academic Dishonesty incorporates more than plagiarism, which is using the work of others without citation. Academic dishonesty includes any use of content purchased or retrieved from web services such as CourseHero.com. Additionally, allowing your work to be placed on such web services is academic dishonesty, as it is enabling the dishonesty of others. The copy and pasting of content from any web page, without citation as a direct quote, is academic dishonesty. When in doubt, do not copy/paste, and always cite.

Submission Guidelines

- Some assignments may have very specific requirements for formatting (such as font, margins, etc) and submission file type (such as .docx, .pdf, etc) See the assignment instructions for details. In general, standard file types such as those associated with Microsoft Office are preferred, unless otherwise specified.

Disclaimer Statement

- Course content may vary from the outline to meet the needs of this particular group.

Communicating on the Discussion

- Discussions are the heart of the interaction in this course. The more engaged and lively the exchanges, the more interesting and fun the course will be. Only substantive comments will receive credit. Although there is a final posting time after which the instructor will grade comments, it is not sufficient to wait until the last day to contribute your comments/questions on the discussion. The purpose of the discussions is to actively participate in an on-going discussion about the assigned content.
- "Substantive" means comments that contribute something new and hopefully important to the discussion. Thus a message that simply says "I agree" is not substantive. A substantive comment contributes a new idea or perspective, a good follow-up question to a point made, offers a response to a question, provides an example or illustration of a key point, points out an inconsistency in an argument, etc.
- As a class, if we run into conflicting view points, we must respect each individual's own opinion. Hateful and hurtful comments towards other individuals, students, groups, peoples, and/or societies will not be tolerated.

Identity Verification & Live Proctoring

- Faculty may require students to provide proof of identity when submitting assignments or completing assessments in this course. Verification may be in the form of a photograph and/or video of the student's face together with a valid photo ID, depending on the assignment format.
- Faculty may require live proctoring when completing assessments in this course. Proctoring may include identity verification and continuous monitoring of the student by webcam and microphone during testing.

University Policies

Student Handbook

- Drop/Withdrawal policy
- Extension Requests
- Academic Probation
- Appeals
- Disability Accommodations

The mission of American Public University System is to provide high quality higher education with emphasis on educating the nation's military and public service communities by offering respected, relevant, accessible, affordable, and student-focused online programs that prepare students for service and leadership in a diverse, global society.