



NR 1020

Division: Natural Science and Mathematics

Department: Natural Resources

Course: NR 1020

Title: Environmental Sampling and Analysis

Catalog Description:

This course will teach the correct method of environmental sampling and analysis. It will include soil, water, and air sampling as well as rudimentary analysis that can be performed on these samples in the field. Further qualitative analysis will be performed in a laboratory. The course will also include an introduction to monitoring.

General Education Requirements: N/A

Semesters Offered: Spring

Credit/Time Requirement: Credit: 2; Lecture: 1; Lab: 3

Offered for Non-Credit: No

Prerequisites: None

Corequisites: None

Justification:

This course will serve as an introduction to the typical testing and analysis that takes place in the environment. It will introduce students to the typical tests that a person working in the natural resources field should be familiar with. The course will also allow students to work directly in the field doing actual projects needed by different organizations.

Student Learning Outcomes:

Upon successful completion of this course, students will be able to:

obtain samples of soil water and air using correct procedures

perform basic water analysis, in the field and laboratory

perform basic soil analysis, in the field and laboratory

perform basic air analysis, in the field and laboratory

record, and present results in the required format

make deductions from their analysis concerning environmental conditions

monitor different aspects of the environment using correct procedure

Content:

This course will include:

Understanding and practice of soil testing and analysis

Understanding and practice of water testing and analysis

Understanding and practice of air testing and analysis

Proper recording and reporting of data

Analysis and use of data to make decisions

principles of monitoring

General Education Outcomes:

7) Apply scientific reasoning to a variety of contexts.

Students will obtain data from testing and be able to draw sensible conclusions from this data. These conclusions will be developed into a recommended plan with the outcome being assessed as part of the section reports.

Applied Education Outcomes:

1) Students will acquire entry-level skills specific to and appropriate for employment in their chosen field of study.

Students will be able to make rudimentary soil, water, and air measurements which may be utilized in any environmental occupation. They will also understand and have practice with environmental monitoring.

Key Performance Indicators:

Attendance: 25%

Soil, Water, air and monitoring section exams : 50%

Soil, Water, air and monitoring section reports: 25%

Representative Text and/or Supplies:

In-house developed materials -

Optimum Class Size: 15
Maximum Class Size: 30

Signatures:

I hereby submit this course syllabus:

Dan Black, EdD, Associate Professor

I hereby find this course consistent with the goals and resources of the Natural Resources Department:

Dan Black, EdD, Associate Professor, Chair

I hereby find this course consistent with the goals and resources of the Natural Science and Mathematics Division:

Dan Black, EdD, Associate Professor, Dean

I have discussed the need for library resources related to this class with the person submitting the syllabus:

Lynn Anderson, MLIS, Technical Services Librarian (Main Campus)

Michelle Olsen, MLS, Campus Librarian (Richfield Campus)