

# **NRM 4311 – Problems in Natural Resources: Soils**

## **Course Syllabus | Summer 2025**

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### **Course Information**

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#### **Instructor**

Dr. Maureen Frank

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830-261-0539 (cell, 9-5 daily, can text/call)

Office: RAS 113

#### **Office Hours**

M/W, 9:00 – 11:00am, or by appointment

#### **Class Meeting Time and Place**

Virtual

#### **Course Description**

This is an independent study course on the origin, formation, and classification of soils, as well as their physical, chemical, and biological properties, and how this information is applied to natural resources conservation and management.

#### **Expanded Course Description**

Soils are fundamental in natural resources management, literally forming a foundation and a matrix for plant, animal, and microbial life. This course will begin with the basics of soil properties and its management, then focus on understanding why soil matters, research needs in soil management science, and how to communicate about soils.

#### **Course Objectives**

At the end of this course, students will be able to:

1. State the importance of soils in ecosystems,
2. Explain the important physical, chemical, and biological characteristics of soils, and
3. Apply knowledge of soil properties to fields such as agronomy, range science, watershed management, and wildlife management.

#### **Student Learning Outcomes, M.S. in Range and Wildlife Management**

1. Demonstrate knowledge elements of an ecosystem.
2. Communicate about natural resources both verbally and in writing.

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## Course Materials and Policies

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### Textbooks

Elements of the Nature and Properties of Soils (4<sup>th</sup> Edition) by Ray Weil and Nyle Brady

Building Soil: A Down-to-Earth Approach by Elizabeth Murphy

### Grading – Points

Research papers (3 @ 100 points each)  
Soil Properties  
Soil and Water  
Soil Biota  
Final project (150 points)

### Grade Scale

A: 89.5 – 100%  
B: 79.5 – 89.4%  
C: 69.5 – 79.4%  
D: 59.5 – 69.4%  
F: < 59.4%

### Due Dates and Extensions

Due dates should be honored by the student and extensions will be given only under exceptional circumstances. **The student must initiate contact with the instructor ahead of time** to request an exception for late work.

### Assignments

This is an independent study class; the more time devoted to study by the student, the more will be learned and gained. The assignments for this class are designed to guide learning that is both interesting and helpful to the student in a future career.

#### *Research papers*

Student will write three papers, each on a different topic of soils. These will be 4-5 pages long and should summarize what the student has learned about each topic. A rubric will be provided.

#### *Final project*

The student will design and complete a final project on a selected applied soils management topic with the goal of communicating to the general public or to landowners. Examples of projects include a fact sheet, a short video, a podcast, or a series of social media posts. The project topic and deliverables need to be approved by the instructor in advance.

### Academic Integrity

Students in this class are expected to demonstrate scholarly behavior and academic honesty in the use of intellectual property. Academic dishonesty will not be tolerated and will receive a grade of zero for any applicable work.

### Communication

You are required to check your **Sul Ross e-mail** and **Blackboard** announcements several times per week. We do not use the personal or preferred e-mail addresses that you may have on record with the University.

### **SRSU Distance Education Statement**

Students enrolled in distance education courses have equal access to the university's academic support services, such as library resources, online databases, and instructional technology support. For more information about accessing these resources, visit the SRSU website. Students should correspond using Sul Ross email accounts and submit online assignments through Blackboard, which requires secure login. Students enrolled in distance education courses at Sul Ross are expected to adhere to all policies pertaining to academic honesty and appropriate student conduct, as described in the student handbook. Students in web-based courses must maintain appropriate equipment and software, according to the needs and requirements of the course, as outlined on the SRSU website. Directions for filing a student complaint are located in the student handbook.

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### **Resources**

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#### **SRSU Disability Services (ADA Statement)**

Sul Ross State University (SRSU) is committed to equal access in compliance with Americans with Disabilities Act of 1973. It is SRSU policy to provide reasonable accommodations to students with documented disabilities. It is the student's responsibility to initiate a request each semester for each class. Alpine students seeking accessibility/accommodations services must contact Mary Schwartz, LPC, SRSU's Accessibility Services Coordinator at 432-837-8203, or email [mschwartz@sulross.edu](mailto:mschwartz@sulross.edu). Our office is located on the first floor of Ferguson Hall – room 112, and our mailing address is P.O. Box C122, Sul Ross State University, Alpine, TX 79832.

#### **Counseling Services**

Sul Ross State University (SRSU) has partnered with TimelyCare, which is an online mental health support platform. All SRSU students have access to nine free counseling sessions. These can be accessed by visiting <https://timelycare.com/srsu>. Counseling is also offered in Ferguson Hall Room 112 in Alpine, and via telehealth Zoom sessions for remote students.

#### **Library Information**

The Bryan Wildenthal Memorial Library in Alpine offers FREE resources and services to the entire SRSU community. Access and borrow books, articles, and more by visiting the library's website, [library.sulross.edu](http://library.sulross.edu). Off-campus access requires logging in with your LoboID and password. Librarians are a tremendous resource for your coursework and can be reached in person, by email ([srsulibrary@sulross.edu](mailto:srsulibrary@sulross.edu)), or phone (432-837-8123).

#### **Blackboard Support Desk**

If you have any technical issues with Blackboard itself, the Blackboard Support Desk is open 24 hours a day, 7 days a week. You can reach the support desk by calling (888) 837-6055, emailing [blackboardsupport@sulross.edu](mailto:blackboardsupport@sulross.edu), using resources from the Technology Support tab within Blackboard, or clicking the Support Desk graphic on the course homepage.

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## Tentative Course Schedule

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*Subject to change, please check Blackboard for updates.*

Week	Dates	Readings	Assignments Due (Sunday at 11:59pm)
1	5/28 – 6/1	Ch. 1, Ch. 2, and Ch. 3: pp. 72-102, 111-114	--
2	6/2 – 6/8	Ch. 4: pp. 117-152, Ch. 7: pp. 239-240, and Ch. 9	Physical Soil Properties paper, final project topic and plan
3	6/9 – 6/15	Ch. 5 and 6	Soil and Water paper
4	6/16 – 6/22	Ch. 10 and 11	Soil Biota paper
5	6/23 – 6/29	Ch. 12 and 13 <b>or</b> Ch. 14 <b>or</b> Ch. 15	Final project draft
6	6/30 – 7/2	--	Final project