

SYLLABUS

Natural Resource Management Systems

ASM/NRM/SOILS 264, 3 credits, Spring 2020

Instructor: Dr. Xinhua Jia

Phone: 701-231-6453

Office: Morrill Hall Room 204

Email: Xinhua.Jia@ndsu.edu

Department: Agricultural & Biosystems Engineering (ABEN)

Class time: MWF 1:00 – 1:50 pm lectures in **Minard 310**

Office hours: MWF 11:00 – 12:00 pm or by appointment

Course Description: General principles of natural resource management, including soil and water conservation, soil and wind erosion, use of tillage and vegetation for conservation, drainage, irrigation, and soil and water quality.

Prerequisite: Math 103, 104, or 107. You are expected to have at least College Algebra knowledge.

Course Objectives

- To understand general principles of natural resource management
- To apply soil and water conservation principles and practices on natural resource management
- To assess the challenges between agricultural productivity and environmental protection

Clicker: Students are required to purchase a TurningPoint Subscription and/or a Clicker to the classroom for class activities (either one will work). Clickers are available at NDSU bookstore. After you have purchased the clickers, you are required to register the clicker before January 27, 2020. You can find student resources at

http://www.ndsu.edu/its/instructional_services/clickers/student_resources/



Textbook: Troeh, F. R., J. A. Hobbs, and R. L. Donahue. 2004. *Soil and Water Conservation for productivity and environmental protection*, 4th Ed., Pearson Education, Inc., Upper Saddle River, New Jersey. Online textbook is available from NDSU library (<https://library.ndsu.edu/>).

Blackboard: Additional reading materials, lecture outlines, and your grades will be posted on Blackboard. You are responsible for checking the course Blackboard regularly and downloading/printing the materials on time.

Evaluation Procedures and Criterion

	Points
Quizzes	100
Project	100
Exam 1	100
Exam 2	100
Final exam	100
Total	500

Grade	Points
A	450 - 500
B	400 - 449
C	350 - 399
D	300 - 349
F	< 300

Grading Policies

1, Class attendances are expected! Quizzes will be randomly given to assess student's understanding of the course materials and check of your attendance during the lecture time. There will be NO makeup quizzes under any circumstances, but two lowest quizzes will be dropped from your total score.

2, Missed exams will receive ZERO point unless it is due to a medical or family emergency. You are required to notify the instructor in advance. Documented proof from an authorized person is required. A makeup exam will be scheduled between the instructor and the student.

3, A group project that is related to a critical environmental issue will be given to students at the beginning of the semester. Group presentations and a final project report will be required and graded. Detailed instructions will be given later in the class.

4, Exams are close book and close notes. Each exam consists of 40 multiple choices.

Other Policies

1, If you are falling behind in the course or have any questions about the course, please see the instructor or email the instructor about your concern as soon as possible.

2, When you contact the instructor through emailing, please use your official NDSU email and put "ASM 264" or "NRM 264" or "SOIL 264" in the subject line of the email. This will ensure that your email be responded to as a priority and your message doesn't fall into the Junk E-Mail folder. I will respond to your email within 24 hours on weekdays and when I am NOT out of town.

3, Use of any electronic devices, such as cell phone and i-pod, are strictly prohibited during exams. You may leave your cell phone in a vibrate mode to receive incoming emergency calls, such as NotiFind.

Academic Honesty: All students taking any course in the College of Agriculture, Food Systems, and Natural Resources are under the Honor System (<http://www.ag.ndsu.edu/academics/honor-system-1>). The Honor System is a system that is governed by the students and operates on the

premise that most students are honest and work best when their honesty, and the honesty of others, is not in question. It functions to prevent cheating as well as penalize those who are dishonest. It is the responsibility of the students to report any violations of the honor pledge to the instructor, honor commission or the Dean of the College of Agriculture, Food Systems, and Natural Resources.

The academic community is operated on the basis of honesty, integrity, and fair play. [NDSU Policy 335: Code of Academic Responsibility and Conduct](#) applies to cases in which cheating, plagiarism, or other academic misconduct have occurred in an instructional context. Students found guilty of academic misconduct are subject to penalties, up to and possibly including suspension and/or expulsion. Student academic misconduct records are maintained by the [Office of Registration and Records](#). Informational resources about academic honesty for students and instructional staff members can be found at www.ndsu.edu/academichonesty.

Students with special requirements: Any students with disabilities or other special needs, who need special accommodations in this course are invited to share these concerns or requests with the instructor as soon as possible. The instructor may ask for verification and that, plus other assistance, can be requested from Disability Services in Lower Level of Main Library, Suite 17 (231-8463). <http://www.ndsu.edu/disabilityservices/>.

Veterans and military personnel: Veterans or military personnel with special circumstances or who are activated are encouraged to notify the instructor as early as possible.

Important Dates

Jan	20	Mon	HOLIDAY — Martin Luther King, Jr. Day (no classes, offices closed)
Jan	23	Thu	Last day to Add classes via Campus Connection* Permit needed after this date.
Jan	23	Thu	Last day for no-record Drop of classes @ 100% refund* (full semester classes only)
Jan	23	Thu	Last day to Withdraw to Zero Credits @ 100% refund* (full semester classes only)
Jan	23	Thu	Attempted credits calculated for financial aid SAP (11:59 p.m.)**
Jan	28	Tue	Financial aid applied to NDSU account balances
Feb	3	Mon	Last day to submit requests to Audit, Pass/Fail
Feb	7	Fri	Undergraduate/Professional Spring and Summer Degree Applications due
Feb	7	Fri	Graduate student Spring Graduate Degree Applications due
Feb	17	Mon	HOLIDAY — Presidents' Day (no classes, offices closed)
Feb	24	Mon	Last day to Withdraw to Zero Credits @ 75% refund* full semester classes only)
Mar	6	Fri	Grades of 'Incomplete' convert to 'F'
Mar	16-20	Mon-Fri	Spring Break Week (no classes, offices open)
Mar	26	Thu	Last day to Withdraw to Zero Credits @ 50% refund* (full semester classes only)
Mar	30	Mon	Summer/Fall registration begins online based on total credits completed
Apr	9	Thu	Last day to Drop classes with 'W' record
Apr	9	Thu	Last day to Withdraw to Zero Credits for Spring
Apr	10	Fri	HOLIDAY -- offices closed Friday
Apr	13	Mon	HOLIDAY -- Spring Recess (no classes, offices open Monday)
Apr	17	Fri	Graduate student Initial Disquisition submission for May graduation
Apr	20	Mon	Open registration for summer/fall
Apr	24	Fri	Spring Commencement Participation deadline
May	4-8	Mon-Fri	Dead Week
May	11-15	Mon-Fri	Final Examinations
May	16	Sat	Commencement ceremonies (10:00 & 2:00 in Fargodome)

TENTATIVE LECTURE SCHEDULE

Natural Resource Management Systems

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Date	Day	#	Topics
1/15	Wed	1	Introduction (Pretest)
1/17	Fri	0	Class cancelled due to storm
1/22	Wed	1	Ch. 1 – Conserving soil and water
1/24, 27	Fri + Mon	2	Ch. 2 – Soil erosion and civilization (Form groups on the 24th)
1/29, 31	Wed + Fri	2	Ch. 3 – Geologic erosion and sedimentation
2/3, 5	Mon + Wed	2	Ch. 4 – Water erosion and sedimentation
2/7, 10	Fri + Mon	2	Ch. 5 – Wind erosion and deposition (Group discussion outline on the 10th)
2/12, 14	Wed + Fri	1	Ch. 6 – Predicting soil loss
2/19	Wed	1	Exam 1 (Ch. 1-6)
2/21, 24	Fri + Mon	2	Ch. 7 – Soil surveys
2/26, 28	Wed + Fri	2	Ch. 8 – Cropping systems
3/2, 4	Mon + Wed	2	Ch. 9 – Tillage practices for conservation
3/6, 9	Fri + Mon	2	Ch. 10 – Conservation structures (Review summery on the 9th)
3/11, 13	Wed + Fri	1	Ch. 11 – Vegetating drastically disturbed areas
3/23, 25	Mon + Wed	2	Ch. 12 – Pastureland, rangeland, and forestland management
3/27	Fri	1	Review and catch up
3/30	Mon	1	Exam 2 (Ch. 7-12)
4/1, 3	Wed + Fri	2	Ch. 13 – Water conservation
4/6, 8, 15	Mon + Wed + Wed	3	Ch. 14 – Soil drainage (Draft report due on the 15th)
4/17, 20	Fri + Mon	2	Ch. 15 – Irrigation and reclamation
4/22	Wed	1	Ch. 15 – Irrigation guest lecture
4/24, 27	Fri + Mon	2	Ch. 16 – Soil pollution
4/29, 5/1	Wed + Fri	2	Ch. 17 – Water quality and pollution
5/4, 6, 8	Mon + Wed + Fri	3	Student presentations (Project presentations)
5/13/2020	Wed	1	1:00 – 3:00 pm, Final exam (Ch. 13-17) Final project report and meeting minutes due before exam