

NRM 240 Natural Resources Measurement and Inventory

Instructor Nancy Fresco
Lectures -

Course Goals

Upon completion of this course students should be able to:

- 1) Understand and describe a range of inventory techniques for natural resource measurement;
- 2) Use critical thinking to select appropriate measurement and inventory techniques for different resource types under differing circumstances and in various landscapes;
- 3) Statistically analyze inventory results in order to derive sound estimates of resource properties;
- 4) Meaningfully critique inventory and measurements methods described in published articles or reports;
- 5) Develop an understanding of the human perceptions tied to natural resource management, and how to measure and account for these perceptions.

Instructional Methods

Presentation of material for this course will include lectures, instructor-led discussions, student-led discussions, and assignments. Students are expected to complete reading assignments prior to each lecture. Assigned homework is expected as scheduled on the course outline.

Course Policies

Attendance, Participation and Preparation: Students are responsible for all material distributed and presented in lectures and laboratory. Lecture attendance is important. Students are expected to come to class with assigned reading and other assignments completed. If necessary, excused absences must be arranged ahead of time. The student code of conduct can be found in the current UAF catalog and at the following website:
<http://www.uaf.edu/catalog/current/academics/regs3.html>.

Assignments: In addition to a mid-term and final exam, students will be responsible for thirteen lab write-ups and six assignments (generally problem sets or short-answer questions) over the course of the semester. Lab write-ups will be due at the next lab session, unless otherwise noted. Assignments will be handed out in class and also made available on Blackboard. The due date will be clearly marked on all assignments. Assigned reading will be posted to Blackboard.

All assignments are expected to be legible. Sentences should be grammatical and easy to read. The burden is always on the writer to communicate with the reader. Assignments may be emailed or turned in during class to the instructor. All assignments must be received by the due date unless otherwise arranged. Each assignment must include the student's name.

Grades: It is my intention to grade and respond to student assignments within seven days, and to post these grades in Blackboard as well as returning assignments in class.

Students should feel free to talk to me about comments or grades made on any assignment or exam. All student grades, transcripts and tuition information are available on line at <http://ww.uaonline.alaska.edu> and in the blackboard grades section.

A student may request an **Incomplete** grade if there are factors beyond his/her control that affect the completion of the course AND the student has a C grade or higher at the end of the semester/course. A Faculty-Initiated **Withdrawal** is done by the instructor when the student has not met the criteria for passing the class, and is within the University-allowed drop period. A **No Basis (NB)** grade is provided if the student has not met attendance/assignment criteria, in lieu of a failing grade, provided it is after the University-allowed drop period. All are at the discretion of the Instructor.

Academic integrity: Plagiarism is using what another person has written, and using it as your own words and thoughts. Plagiarism is never acceptable.

Collaboration and correct **referencing**, on the other hand, are not only acceptable, but are important aspects of scientific research and reporting. We'll be talking about this in class.

Grading

The grade received in this course will be based upon performance on exams, homework, and lab assignments. Lab grades will be based on participation (50%) and quality of the write-up (50%). The following weighting scale will be used. Grades will not be curved, although extra credit may occasionally be available.

<u>Components of grade</u>		<u>Requirements for letter grade</u>	
<i>Midterm Exam</i>	20%	A+ > 96%	C+ 77% to 79%
<i>Final Exam</i>	25%	A 93% to 96%	C 70% to 76%
<i>Homework Assignments</i>	20%	A- 90% to 92%	
<i>Lab Assignments</i>	35%	B+ 87% to 89%	D 60% to 69%
		B 83% to 86%	
		B- 80% to 82%	

Lecture, Lab and Assignment Schedule

Not that this schedule is approximate. Always check Blackboard to make sure of due dates, etc.

		Topic (Lecture and lab Mon., lecture Weds.)	
1	1	Mon Aug 26	Introduction; measurement
		Mon Aug 26	Lab 1: Berry data, veg sampling Lab 1
	2	Weds Aug 28	Accuracy, precision, bias, and estimation #1: Estimation and critical thinking
2	--	Mon Sep 2	LABOR DAY – NO CLASS OR LAB
	3	Weds Sep 4	Sampling #1: Estimation and critical thinking
3	4	Mon Sep 9	Statistics -- intro #2: Conversions
		Mon Sep 9	Lab 2: Measuring individual trees Lab 2 Lab 1 due
	5	Weds Sep 11	Standard error, hypotheses
4	6	Mon Sep 16	Confidence intervals, Type I and II error #2: Conversions
		Mon Sep 16	Lab 3: Tree data collection (TBD) Lab 3 Lab 2 due
	7	Wed Sep 18	T-tests #3 Basic stats problems
		Mon Sep 23	Lab 4: Tree data

7	Mon Oct 7	Maps co	
	Mon Oct 7	Lab 6: Po sampling sampling (weather	
	Wed Oct 9	Land ow measure	
8	Mon Oct 14	Stratified	
	Mon Oct 14	Lab 7: M compass	La
	Wed Oct 16	Stratified	
9	Mon Oct 21	Power an	#5
	Mon Oct 21	Lab 8: In Excel/Sn (weather	Lab b 7 d
	Wed Oct 23	Paired T	
10	Mon Oct 28	Populati growth	#5 W
	Mon Oct 28	Lab 9: Pr CLT	Lab 9 Lab 8
	Wed Oct 30	Pop. eco	