# NRM 240 Natural Resources Measurement and Inventory

**Instructor** Nancy Fresco

Lectures - MW 1:00-2:00 O'Neill 305

**Lab** – Monday 2:15 – 5:15 O'Neill 359 and outdoors – come prepared to spend the lab period outside, regardless of weather!

**Office Hours** – by appointment – email me to set up a time to talk, get extra help, etc.

**Email** – nlfresco@alaska.edu (This is generally the best way to reach me.)

# Reading:

There is no textbook for this class.

Reading material will include articles selected from published scientific literature and reports and websites produced by resource management agencies. These materials will be made available via Blackboard and web links. In some cases, you will be asked to search for literature online.

#### **Course Description**

changing over time?

## **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;
- 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**

<u>Attendance</u>, <u>Participation and Preparation</u>: Students are responsible for all material distributed and presented in lectures and laboratory. Lecture attendance is important. Students

<u>Grades</u>: 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 <a href="http://www.uaonline.alaska.edu">http://www.uaonline.alaska.edu</a> 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.

# **Lecture, Lab and Assignment Schedule**

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

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Mon Aug 29	Introduction; measurement						
Mon Aug 29	Lab 1: Berry data	Lab 1 writeup					
Weds Aug 31	Accuracy, precision, bias, and estimation	#1: Estimation and critical thinking					
Mon Sep 5	LABOR DAYNO CLASS						
Mon Sep 5	LABOR DAYNO LAB						
Weds Sep 7	Sampling	#2: Conversions	#1: Estimation and critical thinking				
Mon Sep 12	Statistics intro						
Mon Sep 12	Lab 2: Measuring individual trees	Lab 2	Lab 1 due				
Weds Sep 14	Standard error, hypotheses		#2: Conversions				
Mon Sep 19	Confidence intervals, Type I and II error						
Mon Sep 19	Lab 3: Tree data collection	Lab 3	Lab 2 due				
Wed Sep 21	T-tests	#3 Basic stats problems					
Mon Sep 26	Point sampling						
Mon Sep 26	Lab 4 More tree data	Lab 4	Lab 3 due				
Wed Sep 28	Point sampling continued		#3 Basic stats problems				
Mon Oct 3	Coordinate systems and mapping						
Mon Oct 3	Lab 5: Point sampling	Lab 5	Lab 4 due				
Wed Oct 5	Maps continued						
Mon Oct 10	Land ownership and measurement	#4: Ecological Datasets					
Mon Oct 10	Lab 6: Map&compass	Lab 6	Lab 5 due				
Wed Oct 12	MIDTERM EXAM						