NRM 73 Course Outline as of Fall 1994

CATALOG INFORMATION

Dept and Nbr: NRM 73 Title: NAT RES MEAS
Full Title: Natural Resource Measurements
Last Reviewed: 3/23/2015

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	2.00	17.5	Lecture Scheduled	35.00
Minimum	3.00	Lab Scheduled	3.00	17.5	Lab Scheduled	52.50
		Contact DHR	0		Contact DHR	0
		Contact Total	5.00		Contact Total	87.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00 Total Student Learning Hours: 157.50

Title 5 Category:	AA Degree Applicable
Grading:	Grade Only
Repeatability:	00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:	
Formerly:	FOR 73

Catalog Description:
An introduction to the mathematics, sampling methods, and measurement techniques involved in inventorying the renewable natural resources. Emphasis will be on the forest resources.

Prerequisites/Corequisites:

Recommended Preparation:
Eligibility for ENGL 100A or ENGL 100.

Limits on Enrollment:

Schedule of Classes Information:
Description: Sampling methods & measurement techniques involved in inventorying the renewable natural resources. Emphasis will be on forest resources. (Grade Only)
Prerequisites/Corequisites:
Recommended: Eligibility for ENGL 100A or ENGL 100.
Limits on Enrollment:
Transfer Credit: CSU;
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**			Effective:	Inactive:
CSU GE:	**Transfer Area**			Effective:	Inactive:
IGETC:	**Transfer Area**			Effective:	Inactive:
CSU Transfer:	Transferable	Effective:	Spring 1984	Inactive:	Fall 2020
UC Transfer:		Effective:		Inactive:	

CID:

Certificate/Major Applicable:
Certificate Applicable Course

COURSE CONTENT

Outcomes and Objectives:
The student will:
1. Comprehend, explain and discuss the objectives and goals of a forest inventory project.
2. Understand and apply the various field sampling methods.
3. Possess and demonstrate the fundamental mathematics and statistics involved in resource inventory work.
4. Know and demonstrate the use of various types of resource inventory instruments and equipment.
5. Recognize and estimate various types of tree defects.
6. Plan, implement and accomplish a forest inventory project.
7. Recognize and explain woods safety procedures.

Topics and Scope:

I. Timber Inventory
  A. Timber Inventory Defined
    1. History and Development of Inventory Techniques
    2. Purposes of a Timber Inventory
    3. Agencies and Firms Involved in Timber Inventorying
  B. Individual Tree Measurement
    1. Species Identification
    2. Inventory Equipment
    3. Utilization Standards
    4. Height and Diameter Measurements
    5. Gross Volume Determination
  C. Individual Tree Grading
    1. Recognition of Defect Types
    2. Cull Allowance for Defects
    3. Log Grade Estimation
    4. Net Tree Volume Determination
  D. Inventory Methods

1. Strip Cruising
2. Plot Cruising
3. Variable Plot Cruising

E. Log Volume Tables
1. Local Volume Tables
2. Standard Volume Tables
3. Form Class Volume Tables
4. Volume Table Construction

II. Log Scaling

A. Log Scaling Defined
1. History of Scaling and Scaling Practices
2. Purposes of Log Scaling
3. Agencies Involved in Log Scaling

B. Individual Log Measurement
1. Species Identification
2. Scaling Equipment
3. Utilization Standards
4. Length and Diameter Measurements

C. Individual Log Grading
1. Recognition of Defect Types
2. Cull Allowance for Defects
3. Log Grade Estimation
4. Net Log Volume Determination

D. Various Log Rules in Use
1. Board Foot Log Rules
2. Cubic Foot Log Rules
3. Diagram Rules
4. Formula Rules

III. Non-Timber Resource Measurement

A. Recreation and Water Resources
B. Wildlife and Range
C. Soils and Fisheries

Assignment:

Students will be required to complete:
1. Reading assignments that will average 10 pages per week.
2. Four timber inventory reports totaling twenty pages.
3. Timber inventory field notebook totaling twenty-five pages of field measurements.
4. Five practice sets totaling fifteen pages of computations.

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

None, This is a degree applicable course but assessment tools based on writing are not included because problem solving assessments and skill demonstrations are more appropriate for this course.	Writing 0 - 0%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Homework problems, Field work, Lab reports, Exams	Problem solving 20 - 20%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Field work	Skill Demonstrations 40 - 40%

Exams: All forms of formal testing, other than skill performance exams.

Completion, SHORT ESSAY QUESTIONS	Exams 40 - 40%

Other: Includes any assessment tools that do not logically fit into the above categories.

None	Other Category 0 - 0%

Representative Textbooks and Materials:

Avery, T.E., 1975, "Natural Resources Measurements", 337 pp., McGraw-Hill, New York.