CAMBRIAN COLLEGE
of Applied Arts and Technology
Sault Ste. Marie

COURSE OUTLINE

FOREST MENSURATION

FOR 228 - 3

Revised 1969

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TOPIC NO.	PERIODS		TOPIC INFORMATION
1	2	I	Introduction to Forest Measurements

A. Standard units of measurement as used in forestry.
   1. Measurement of products and logs.
   2. Measurement of the tree.
   3. Measurement of growth.

B. Scope of forest measurements.
   1. Division of the science of mensuration into 6 major sections.

2	8	II	Tree Measurement

A. Diameter measurements
   1. Diameter breast height
   2. Diameter measuring techniques
      a) diameter classes
      b) irregular formed trees
      c) accuracy of measurements
   3. Instruments and their method of use-
      a) tree calipers
      b) diameter tape
      c) biltmore stick
      d) wheeler dendrometer
      e) others

B. Height measurement of standing trees
   1. Total height vs. merchantable height.
   2. Use and advantages of various height measuring devices.
      a) staff hypsometer
      b) Abney hand level
      c) Haga altimeter
      d) Clinometer
      e) Spiegel reloskop
      g) others

b) geometric principle.
c) measurements taken on a slope.
d) measurement of leaning tree.

C. Age measurement
1. Increment cores
2. Total and seedling age

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III Timber Inventory

A. Factors influencing timber estimates
1. Purpose
2. Size of area
3. Time allocation
4. Cost estimates
5. Timber valve
6. Topography

B. Method of data tabulation and presentation.
1. Field tally sheets
2. Punch card data and mark sense cards.

C. Sources and limits of error in timber estimating.

D. Total Estimates
1. where and when utilized
2. method of operation.

E. Sampling procedures
1. size and shape of sampling unit
2. systematic sampling
3. random sampling
4. stratified random sampling
5. intensity of sampling