

**SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY****SAULT STE. MARIE, ONTARIO****COURSE OUTLINE**

COURSE TITLE: RESOURCE SAMPLING

CODE NO.: FOR223 SEMESTER: 3

PROGRAMS: FORESTRY TECHNICIAN  
FISH & WILDLIFE TECHNICIAN  
PARKS & OUTDOOR RECREATION TECHNICIAN

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DATE: AUGUST 1997

PREVIOUS OUTLINE DATED: SEPTEMBER 1995

APPROVED:

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BRIAN PUNCH, DEAN  
NATURAL RESOURCES PROGRAMS

DATE:

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TOTAL CREDITS: 3

PREREQUISITES: Mensuration/Mapping strongly recommended.  
Enrollment in statistics or a previous statistics course

LENGTH OF COURSE: 3 HRS/WEEK - 16 WEEKS

TOTAL CREDIT HOURS: 48

RESOURCE SAMPLING

FOR223-3

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COURSE NAME

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CODE NO.**I. COURSE DESCRIPTION:**

To provide the student with the skills and abilities required to perform representative and reliable resource samples in the field in an accurate, precise, neat and professional manner. Since this is an approved General Education course, the variety in assignments, evaluation tools, and teaching/learning methods ensure that the general education requirements are met.

**II. LEARNING OUTCOMES:****A. Learning Outcomes:**

## 1. Describe the four stages of a resource sample

**Potential Elements:**

- review unit 1 in the study guide and reflect on the concepts
- correctly answer the review questions in unit 1

## 2. Keep neat and accurate field notes

**Potential Elements:**

- Each time the student collects and tallies data, the importance of neat and accurate field notes will be emphasized.

## 3. Describe various concepts associated with resource sampling including sample theory, sample intensity, types of plots, plot multiplying, random samples, two stage samples, systematic samples stratification accuracy, bias, precision, statistical terms, basal area per ha, volume per hectare, stand density, stocking bias, diversity index, biotic index, benthos, demographics, lykert scale, research question parameter statistic and statistical analysis.

**Potential Elements:**

- review each of the units
- answer the review questions
- complete the assignments

## 4. Perform representative and reliable resource samples in the field in an accurate, precise, neat and professional manner

**Potential Elements:**

- perform various resource samples
- collect the data
- compile the results
- present the results in a written report



5. Calculate the descriptive stats involved with resource sampling including mean, standard deviation, standard error of the mean, confidence limits, T tests, sample intensity and the number of samples required to achieve desired precision level.

**Potential Elements:**

- review unit 7
- verify the answers used in examples
- answer the exercises correctly

**III. TOPICS:**

1. Introduction to Resource Sampling
2. Four stages of Resource sampling
3. Resource sampling concepts including: Sampling Theory, Sample Intensity, Types of Plots, Plot Multipliers, Stems/Ha, Basal area/Ha, Volume/Ha, Mean, Standard Deviation, Height & DBH measurements
4. Designing Natural Resource Samples
5. Forestry Surveys
6. Fish & Wildlife Surveys
7. Parks Surveys
8. Descriptive Statistics Used in Resource Sampling
9. Introduction to handheld Microcomputers

**IV. LEARNING ACTIVITIES**

1. Students will be introduced to the importance of Resource Sampling
2. Students will learn the four stages of any resource sample
3. Students will learn the key concepts involved in resource sampling, collect and analyze data and write reports
4. Students will learn what is involved in designing a resource sample
5. Forestry Surveys: Students will perform forestry surveys including strip cruises and prism cruises
6. Fish & Wildlife Surveys: Students will perform fish & wildlife surveys including a Deer Habitat Survey and a Benthos Survey
7. Parks Survey (Gallop Opinion Poll): Students will develop a 10 question survey questionnaire, poll 15 people about a specific parks issue, analyze the data and prepare a report based on this research.
8. Descriptive statistics: Students will perform various statistical calculations used in resource samples.
9. Hand Held Microcomputers: Students will be introduced to ITACRUZ on the DAP1000's