



EFFECTIVE: SEPTEMBER 2002

CURRICULUM GUIDELINES

A: Division: **Instruction** Date: **November 2001**
 B: Department/ **Commerce & Business Admin.** New Course Revision
 Program Area: **HISP**
 If Revision, Section(s) Revised: **H**
 Date Last Revised: **1991-12: F, N, O, P**

C: **BUSN 337** D: **Research Applications I** E: **3**

Subject & Course No.	Descriptive Title	Semester Credits
F: Calendar Description: This course, restricted for HISP program students, is an introduction to statistics in health record information systems with applied computer analysis using SPSS. Topics covered include: preparing data for analysis, describing data, probability distributions, sampling, testing hypotheses, and examining relationships between variables.		
G: Allocation of Contact Hours to Types of Instruction/Learning Settings Primary Methods of Instructional Delivery and/or Learning Settings: Lectures and Seminars Number of Contact Hours: (per week / semester for each descriptor) Lecture: 2 Hrs. Other: 2 Hr. Total: 4 Hrs. Number of Weeks per Semester: 15 Weeks X 4 Hrs per week = 60 Hrs.	H: Course Prerequisites: Second semester standing or permission of instructor. Effective September 2002: English 12 with a grade of "C" or better or equivalent.	
	I: Course Corequisites: nil	
	J: Course for which this Course is a Prerequisite: Research Applications II	
	K: Maximum Class Size: 24	
L: PLEASE INDICATE: <input type="checkbox"/> Non-Credit <input checked="" type="checkbox"/> College Credit Non-Transfer <input type="checkbox"/> College Credit Transfer: Requested <input type="checkbox"/> Granted <input type="checkbox"/> SEE BC TRANSFER GUIDE FOR TRANSFER DETAILS (www.bccat.bc.ca)		

M: Course Objectives/Learning Outcomes

At the end of the course, the successful student should be able to:

1. Describe data using measures of central tendency and variability;
2. Utilize SPSS statistical software to extract data from a database (PRISM), conduct basic statistical computations, and analyze the results.
3. Calculate the probability of mutually exclusive, dependent or independent events; apply probability distributions to make estimates;
4. Identify appropriate sampling techniques in order to make inferences about the population mean or proportion;
5. Set up confidence intervals and conduct tests of significance for the population mean, proportion and variance using small or large samples;
6. Set up and conduct tests of hypotheses and interpret results;
7. Examine relationships between variables using correlation and linear regression.

N: Course Content

1. Review of Descriptive Statistics
 - C scales of measurement
 - C frequency distributions
 - C histograms, graphs and diagrams
 - C averages and variation
 - C using SPSS for computing frequencies, averages and variance
 - C cross-tabulation
2. Introduction to SPSS
 - C setting up a data file
 - C defining data
 - C running SPSS/PC+
 - C the PRISM data base
3. Probability and Probability Distributions
 - C approaches to probability
 - C measures of probability or expectation
 - C mutually exclusive events
 - C independent and dependent events
 - C conditional probabilities
 - C binomial, normal, and poisson distributions
4. Sampling Theory and Techniques
 - C types of sampling
 - C surveys
 - C sampling distributions
5. Statistical Inference
 - C population parameters and sample statistics
 - C sampling distribution of the mean
 - C standard error of the mean

- C first limit theorem and central limit theorem
- C estimation of the population mean
- C confidence intervals
- C sample size
- C estimation of the population proportion
- C z-scores, t-distribution, chi-square distribution
- C using SPSS in statistical inference

6. Hypothesis Testing

- C null and alternative hypotheses
- C test statistics
- C test of significance, decision rule
- C Type I and Type II error
- C z-test, t-test, chi-square test
- C using SPSS to test statistical hypotheses

7. Examining Relationships

- C correlation co-efficient (r)
- C linear regression
- C standard error of the estimate
- C co-efficient of determination
- C using SPSS to calculate (r) and simple regression lines

O: Methods of Instruction

Lecture/discussion

Computerized application exercises. A significant component of this course requires individual usage of computer facilities.

P: Textbooks and Materials to be Purchased by Students:

Daniel W. Biostatistics: A Foundation for Analysis in the Health Sciences, 5th Edition, Wiley, 1991.

Raymond Yu. **Research Applications I Manual for BUSN 337**, Douglas College Printers, 1991.

Q: Means of Assessment

Assignments (Minimum 4)	40%
Mid-term Exam	20%
Final Exam	30%
Participation	<u>10%</u>

100%
R: Prior Learning Assessment and Recognition: specify whether course is open for PLAR No.

Course Designer(s): **Patrick Brown**

Education Council/Curriculum Committee
Representative

Dean/Director: **Jim Sator**

Registrar: **Trish Angus**

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