



EFFECTIVE: JANUARY 2009
CURRICULUM GUIDELINES

A. Division: **Instruction** Effective Date: **January 2009**

B. Department / **Commerce & Business Admin.** Revision New Course
 Program Area: **HISP** If Revision, Section(s) Revised: **H**

Date of Previous Revision: **September 2004**
 Date of Current Revision: **August 2008**

C: **BUSN 2337** 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 Type 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 Hours Seminar: 2 Hours Total: 4 Hours Number of Weeks per Semester: 15 Weeks X 4 Hours per Week = 60 Hours	H: Course Prerequisites: Second semester standing or permission of instructor.
	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:

SEE BC TRANSFER GUIDE FOR TRANSFER DETAILS (www.bctransferguide.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
 - . scales of measurement
 - . frequency distributions
 - . histograms, graphs and diagrams
 - . averages and variation
 - . using SPSS for computing frequencies, averages and variance
 - . cross-tabulation
2. Introduction to SPSS
 - . setting up a data file
 - . defining data
 - . running SPSS/PC+
 - . the PRISM data base
3. Probability and Probability Distributions
 - . approaches to probability
 - . measures of probability or expectation
 - . mutually exclusive events
 - . independent and dependent events
 - . conditional probabilities
 - . binomial, normal, and poisson distributions
4. Sampling Theory and Techniques
 - . types of sampling
 - . surveys
 - . sampling distributions
5. Statistical Inference
 - . population parameters and sample statistics
 - . sampling distribution of the mean
 - . standard error of the mean
 - . first limit theorem and central limit theorem
 - . estimation of the population mean
 - . confidence intervals
 - . sample size
 - . estimation of the population proportion
 - . z-scores, t-distribution, chi-square distribution
 - . using SPSS in statistical inference

<p>6. Hypothesis Testing</p> <ul style="list-style-type: none"> . null and alternative hypotheses . test statistics . test of significance, decision rule . Type I and Type II error . z-test, t-test, chi-square test . using SPSS to test statistical hypotheses <p>7. Examining Relationships</p> <ul style="list-style-type: none"> . correlation co-efficient (r) . linear regression . standard error of the estimate . co-efficient of determination . using SPSS to calculate (r) and simple regression lines 										
<p>O: Methods of Instruction</p> <p>Lecture/discussion Computerized application exercises. A significant component of this course requires individual usage of computer facilities.</p>										
<p>P: Textbooks and Materials to be Purchased by Students</p> <p>Daniel W. <u>Biostatistics: A Foundation for Analysis in the Health Sciences</u>, 5th Edition, Wiley, 1991.</p> <p>Raymond Yu. Research Applications I Manual for BUSN 337, Douglas College Printers, 1991.</p>										
<p>Q: Means of Assessment</p> <table style="margin-left: 40px;"> <tr> <td>Assignments (Minimum 4)</td> <td style="text-align: right;">40%</td> </tr> <tr> <td>Mid-term Exam</td> <td style="text-align: right;">20%</td> </tr> <tr> <td>Final Exam</td> <td style="text-align: right;">30%</td> </tr> <tr> <td>Participation</td> <td style="text-align: right;"><u>10%</u></td> </tr> <tr> <td></td> <td style="text-align: right;"><u>100%</u></td> </tr> </table>	Assignments (Minimum 4)	40%	Mid-term Exam	20%	Final Exam	30%	Participation	<u>10%</u>		<u>100%</u>
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<p>R: Prior Learning Assessment and Recognition: specify whether course is open for PLAR</p> <p>No</p>										

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

Education Council / Curriculum Committee Representative

Dean / Director: **Robert Buller**

Registrar: **Trish Angus**