



EFFECTIVE: SEPTEMBER 2004 CURRICULUM GUIDELINES

A. Division: **Instruction** Effective Date: **September 2004**

B. Department / Program Area: **Commerce & Business Admin. HISP** Revision New Course

If Revision, Section(s) Revised: **C**

Date of Previous Revision: **2002-09 H**

Date of Current Revision: **2004-09**

C: **BUSN 2337** D: **Research Applications I** E: **3**

| Subject & Course No. | Descriptive Title | Semester Credits |
|----------------------|-------------------|------------------|
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|-----------|--|--|--|------------|---|-----------------------------|--|--------------------------|
| F: | <p>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.</p> | | | | | | | |
| G: | <p>Allocation of Contact Hours to Type of Instruction / Learning Settings</p> <p>Primary Methods of Instructional Delivery and/or Learning Settings:</p> <p>Lectures and Seminars</p> <p>Number of Contact Hours: (per week / semester for each descriptor)</p> <p>Lecture: 2 Hours Seminar: 2 Hours Total: 4 Hours</p> <p>Number of Weeks per Semester:</p> <p>15 Weeks X 4 Hours per Week = 60 Hours</p> | <p>H: Course Prerequisites:</p> <p>Second semester standing or permission of instructor. English 12 with a letter grade of "C" or better or equivalent</p> | | | | | | |
| | | <p>I: Course Corequisites:</p> <p>Nil</p> | | | | | | |
| | | <p>J: Course for which this Course is a Prerequisite</p> <p>Research Applications II</p> | | | | | | |
| | | <p>K: Maximum Class Size:</p> <p>24</p> | | | | | | |
| L: | <p>PLEASE INDICATE:</p> <table style="border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 30px; height: 20px; text-align: center;"> </td> <td style="padding-left: 5px;">Non-Credit</td> </tr> <tr> <td style="border: 1px solid black; width: 30px; height: 20px; text-align: center;">X</td> <td style="padding-left: 5px;">College Credit Non-Transfer</td> </tr> <tr> <td style="border: 1px solid black; width: 30px; height: 20px; text-align: center;"> </td> <td style="padding-left: 5px;">College Credit Transfer:</td> </tr> </table> <p>SEE BC TRANSFER GUIDE FOR TRANSFER DETAILS (www.bccat.bc.ca)</p> | | | Non-Credit | X | College Credit Non-Transfer | | College Credit Transfer: |
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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

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|--|-------------------------|-----|---------------|-----|------------|-----|---------------|------------|--|-------------|
| <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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| | <u>100%</u> | | | | | | | | | |
| <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: **Rosilyn G. Coulson**

Registrar: **Trish Angus**