					C	
			Re	vised:		
			Da	te of Previous Revision:	2002-09 H	
			Da	te of Current Revision:	2004-09	
<b>C</b> :		D:			<b>E</b> :	
			Research Applications I		3	
	Subject & Course No.	Descrip	tive Ti	tle Se	emester Credits	
F:	Calendar Description: This course, restricted for HISP program students, is an introduction to stta					
	, probability distributions, sampling, testing hypotheses, and examining relationships between variables.					
G:	Allocation of Contact Hours to / Learning Settings	Illocation of Contact Hours to Type of Instruction Learning Settings		Course Prerequisites:		
	Primary Methods of Inst			Second semester standing or permission of instructor. English 12 with a letter grade of		
				"C" or better or equivale	ent	
	Number of Weeks per Semester:  15 Weeks X 4 Hours per Week = 60 Hours		I:	I: Course Corequisites:		
				Nil		
			J:	J: Course for which this Course is a Prerequisite		
				Research Applications II	[	
			K:	Maximum Class Size:		
				24		
L:	PLEASE INDICATE:					
	Non-Credit  College Credit Non-Transfer					
	College Credit Transfer:					
	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
  - . 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

Date: September 2004