WINTER 2019

Champlain
COLLEGE SAINT-LAMBERT

360-101-LA
Quantitative Methods in the Social Sciences

IMPORTANT INFORMATION

Academic Discipline for this Course
Methodology

Credits, Course Length, and Hours
360-101-LA is worth 2.00 credits. The course has a weighting of 2-2-3 which translates to 2 hours of lecture time each week, 2 hours of lab (or practical) time each week and 3 hours of anticipated homework per week. To achieve good results in this course, students are expected to dedicate at least **3 hours** per week outside of classes.

The role of this course in the program
Quantitative Methods is a compulsory course for all Social Science students. This course completely satisfies the ministerial objective 022P which is to apply statistical tools to the interpretation of data related to contexts of study in the field of Social Science. It is the prerequisite for the Introduction to Methodology course and the Integration Seminar in the Social Sciences.

Evaluations
Quizzes: 30%
Tests: 40%
Exercises and Labs: 30%

Reading Material
Bennett, Jeffrey O., William L. Briggs, and Mario. F. Triola. Statistical Reasoning for Everyday Life. Toronto: Pearson (3rd, 4th, and 5th editions are acceptable).

About the instructor
- Name: Mark Paradis
- Email: MIO
- Office hours:
  - T 10:00-11:00
  - Th 10:30-11:30
- Office: F-225

The main objective of this course is to acquaint the students with the fundamental concepts and basic techniques of quantitative methods and with their uses in the Social Sciences. It should also help them understand and evaluate quantitative information presented in daily life (i.e. newspapers, polls, consumer reports, etc.) or in a Social Science setting (i.e. the results of scientific research). In the course, students will learn how information is quantified and how to read and evaluate numbers reported in the media and in texts and journals. Students will become more critical consumers of numerical or quantitative data.

COURSE MATERIALS

- Bennett, Jeffrey O., William L. Briggs, and Mario. F. Triola. Statistical Reasoning for Everyday Life. Toronto: Pearson (3rd, 4th, and 5th editions are acceptable).
- A calculator

COURSE OBJECTIVES

To apply statistical tools to the interpretation of data related to contexts of study in the field of Social Science. By the end of this course, students are expected to be able to:

- understand the meanings of the basic terms used in Quantitative Methods as they relate to the Social Sciences;
- acquire a basic knowledge of the main research methods necessary for an understanding of QM course material;
- present quantitative data in an appropriate way, using tables and charts;
- understand and evaluate quantitative information presented in daily life (e.g., newspapers, polls, media) and published social science research;
- identify various types of variables and scales of measurement;
- calculate and interpret various measures of central tendency, dispersion, and position;
- know the basic issues that relate to sampling and to data gathering;
- understand descriptive statistics and be able to apply them appropriately;
- understand inferential statistics and be able to apply them appropriately;
- estimate the parameters of a given population based on the corresponding statistics obtained from a sample

- perform hypothesis testing (using as a minimum, the Chi Square test of independence) and interpret the results;
- calculate and interpret measures of association using scatterplots, correlations coefficients, and make predictions using the regression equation;
- create an electronic data file, using SPSS, and perform the statistical operations learned in the course.

STUDENT EVALUATION

Quizzes (3 x 10% summative)	30%
Tests (midterm and final exam, 2 x 20%; summative)	40%
Exercises and labs	*30%*

- Group work (labs 1-5, 5 x 5%; formative)
- Review Exercises (2 x 2.5%; summative)

Quiz 1 and Lab 1 will be used for the midterm assessment grade.

Evaluation Details

The quizzes, exercises and labs test your knowledge of the basic statistics required to do research projects. You are required to demonstrate the ability to perform these operations using SPSS, the statistical package for the social sciences, a popular statistical software. You are required to submit your lab work through Lea / Omnivox, and to follow the format set out by your teacher for lab assignment submissions.

SCHEDULE

Note: the schedule is subject to change.

01/21 – Course Outline
01/24 – Intro to Statistics and Data
01/28 – Errors; Percentages
01/31 – Gathering and Visualizing Data
02/04 – Describing Data
02/07 – Intro to SPSS
02/11 – Quiz 1
02/14 – Lab 1
02/18 – Normal Distribution
02/21 – Normal Distribution; Z-score
02/25 – Probability
02/28 – Lab 2; review exercise assigned
03/04 – NO CLASS (Spring Break)
03/07 – NO CLASS (Spring Break)
03/11 – Review for Midterm
03/14 – Lab 3; review questions due on Lea forum
03/18 – Midterm
03/21 – Correlations
03/25 – Hypothesis testing
03/28 – No Class (instructor attending International Studies Association convention)
04/01 – Hypothesis testing

04/04 – Lab 4
04/08 – Quiz 2
04/11 – T-test
04/15 – T-test; Chi-Square
04/18 – Lab 5
04/22 – NO CLASS (Easter Monday)
04/25 – Chi-Square; ANOVA
04/29 – Quiz 3
05/02 – ANOVA
05/06 – Review for Final
05/07 – Review Questions due on Lea forum
05/09 – Final Exam

COURSE POLICIES:

To ensure that you have the best possible chance of succeeding in this course and that you have the best possible learning environment, the following policies are in effect:

Email/MIO ASSIGNMENTS: Assignments sent by email WILL NOT be accepted unless otherwise specified.

LATE assignments: One of the goals of CEGEP is to help you to develop skills in managing deadlines. All assignments are to be handed in on the day assigned at the beginning of class. Late marks will be given to all assignments received after class has begun, unless official documentation is presented to the Registrar's office. Late marks are as follows: 5% per day. Late assignments will not be accepted more than a week late.

CLASSROOM COMPORTMENT guidelines: The classroom is an educational environment. All students will be treated with respect, regarded as equals, and treated fairly without discrimination. On your part, you will be expected to respect your peers' right to learn in the best possible environment and to act as responsible adults. To this end, completing work unrelated to the course, private conversations, talking during lectures, sleeping, and any other disruptive behaviour is not permitted. In particular, the following are prohibited during class time: using cell phones for calling, texting or photography, listening to an iPod or other audio device, using a laptop for purposes other than note-taking or unrelated to the course (laptop users must sit in front row), chatting while teacher or classmates are speaking, passing notes to a classmate(s), doing work/reading material for another course, putting your head down on the desk, sleeping in class.

ACADEMIC INTEGRITY and EVALUATION: The College has established a comprehensive policy on the evaluation of students, which spells out the criteria on literacy, plagiarism, cheating and attendance. This policy will be applied in the course. It is your responsibility to familiarize yourself with the policy. Key excerpts are printed in the current college calendar. Disciplinary action runs from receiving a zero grade on the work in question to expulsion from the college. Here's a more constructive solution: If you are having trouble with any part of this course, come see me as soon as possible. There are usually more solutions available if we address the problem early. You should retain all copies, rough drafts, notes etc. of all your work so that should you wish to appeal a grade, you will have evidence of your work. Save all of your work on your own data storage device.

ATTENDANCE, PUNCTUALITY AND PARTICIPATION are extremely important. They are an integral part of a positive attitude toward your academic responsibilities. Attendance has a proven positive effect on your success in the course. Students who miss more than 3 classes/meetings are usually unable to successfully pass the course because they have missed too much material. Avoid arriving late to class or

leaving early as it distracts your fellow students and it will result in your being marked absent for the day. It is not enough to just hand your work in: you must attend classes and be "mentally" present during classes. Chronic absenteeism will affect your grade. If you miss a class, get the notes from a classmate. You can also see me during my office hours

LITERACY: The proper use of English in all your work is very important and will affect your grade in this course. If I cannot understand what you are trying to say, I cannot give you a grade. In addition to disciplinary content, such written work will also be evaluated for adequate writing style and mechanics. The correction of written English is part of the quality of the teaching offered at Champlain Saint Lambert. One of the goals of this course is for students to use and develop their English-language skills in reading and oral comprehension, speaking and writing. All assignments and papers must be typed, be presented in the correct form, be well-written and organized and be printed using a computer printer unless otherwise specified. Evaluation criteria applied are academic tone, appropriate disciplinary vocabulary, flow and clarity of style, continuity, correct paragraph and sentence structures, grammar, punctuation, spelling and use of adequate in-text and end-text documentation according to Chicago, in-text style. There are language tutors and other services available at the learning center for any Champlain students in need of help in this area. it is your responsibility to get the help you need.

CLEAR GRADING: Every evaluation method will contain clear grading criteria. Numerical grades will be assigned as follows, as per the College policy: 90-100% for work that is of outstanding quality, 80-90% for very good work quality, 70-79% good quality work, 60-69% work that is of satisfactory quality, and 0-59% for work that is of unsatisfactory quality (failure).