

APPLIED SCIENCE AND MANAGEMENT DIVISION

BUS307

3 Credit Course

Fall, 2018



COURSE OUTLINE

BUS307

Introduction to Probability & Statistics (Statistics II)

45 HOURS

3 CREDITS

PREPARED BY: Lisa Kanary, Instructor

DATE: September 3, 2018

APPROVED BY: Rodney Hulstein, Acting Dean

DATE: September 4, 2018

APPROVED BY ACADEMIC COUNCIL: Click or tap to enter a date

RENEWED BY ACADEMIC COUNCIL: Click or tap to enter a date



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INTRODUCTION TO PROBABILITY & STATISTICS (STATISTICS II)

INSTRUCTOR: Lisa Kanary, PhD	OFFICE HOURS: Friday 9:00 - 10:00am
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OFFICE LOCATION: A2433	CLASSROOM: A2204 & A2408
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E-MAIL: lkanary@yukoncollege.yk.ca	TIME: M/W 10:30 am - 11:55 am
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TELEPHONE:	DATES: Sept. 5 - Dec. 3, 2018
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COURSE DESCRIPTION

Business 307 is a continuation of the introductory statistics course offered in the first year of the Business Administration program at Yukon College. Students successfully completing both Business 111 and Business 307 will have a solid grounding in basic business statistics.

Perhaps more so than in Business 111, the emphasis in Business 307 will be on the application of statistical models to “real world” problems of uncertainty and variability. The instructor will continue to concentrate on building a sound knowledge of the use (and potential misuse) of statistical methods to provide students with a basis for future administrative problem solving and analysis. As in Business 111, a certain amount of mathematical development will be involved, but we will look mainly at how the basic concepts are applied, rather than spending time on theorems and formulas.

Business 307 will pick up where Business 111 left off - with statistical inference. The instructor will cover analysis of variance techniques, chi-square analysis, a number of non-parametric techniques and linear regression and correlation during the first seven weeks of the course. A considerable amount of classroom time will then be spent on multiple regression and multiple regression models.

Towards the end of the course, the instructor will move on to cover some statistical applications specific to business and economics, namely time-series analysis and statistical quality control.

Just prior to the final examination, the instructor will re-visit the probability concepts covered very early on in Business 111 and show how these concepts can be applied to decision making in different business situations.

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PREREQUISITES

BUS 111. Other Statistics courses may qualify as prerequisites; please check with instructor or academic advisor.

EQUIVALENCY OR TRANSFERABILITY

For more information about transferability, please refer to the BCCAT Transfer Guide (<http://www.bctransferguide.ca/search/course>), or contact the Schools of Applied Science and Management (668-8762) or Liberal Arts (668-8770).

LEARNING OUTCOMES

Upon successful completion of the course, students will be able to:

1. As in **Business 111**, one of the objectives of this course is to familiarize students with a number of statistical techniques applicable to business problem solving
2. A second objective is to familiarize students with the analytical power of computer-based statistical packages. Students should be reasonably adept with **MINITAB** and/or **EXCEL** upon completion of this course.
3. A third objective is to ensure that students become intelligent consumers of statistical data, particularly as this relates to the output from computer-based statistical packages.
4. A final objective is to acquaint students with the methodology of applied research, in the hope that students - at some point - will be able to apply this methodology in the workplace.

COURSE FORMAT

The course format is comprised of lectures, computer laboratory assignments, self-directed homework exercises, collaborative exercises/assignments, audio/visual presentations, case studies, and research projects. Supplementary materials are available on the Moodle site for this course. It is important to check this site and your college email frequently for updates.

Each week, a new chapter will be covered in a lecture and a lab. There will be a summarized presentation provided on Moodle each week to print and take to class with the option of adding your own notes for reference. To reinforce your understanding of the material, a class will be devoted to hands on application of the material covered in the previous class using Excel, if necessary or applicable.

ASSESSMENTS:

Attendance & Participation (10%)

The material covered in the classroom and lab will be cumulative; therefore, regular student attendance and participation are essential. A portion of the final grade is based on attendance and participation in class. Parts of the midterm and final exams will be based directly on class lectures and discussions. Participation includes attending class, listening in the classroom, participating in exercises, and supporting class members.

Assignments (20%)

Students who complete the assigned questions prior to the date of the test should have no problem scoring well on these assignments. There are five (5) assignments and students are given one week to complete each assignment. One extra week will be given for late assignments with a ten per cent (10%) deduction, after which time, assignments will not be accepted. All assignments should be delivered in class word-processed and/or emailed as a set of Excel spreadsheets.

Research Project (20%)

A real-world situation with relevant data sets will be given to each student to apply statistical techniques acquired in the course. The project will be presented at the end of the course with proper analyses, a report, and an oral presentation of the results.

Midterm (20%)

There will one two-hour midterm test in this course held during regular class sessions, as indicated in the accompanying syllabus.

Final Exam (30%)

There will be a three-hour final examination. Details on this examination will be provided near the end of the term.

EVALUATION:

Participation	10%
Assignments	20%
Research Project	20%
Midterm Exam	20%
Final Exam	30%
Total	100%

REQUIRED TEXTBOOKS AND MATERIALS

Keller, G. (2017): *Statistics for Management and Economics Eleventh Edition*: Cengage Learning, 458 pp.

ACADEMIC AND STUDENT CONDUCT

Information on academic standing and student rights and responsibilities can be found in the current Academic Regulations that are posted on the Student Services/ Admissions & Registration web page.

PLAGIARISM

Plagiarism is a serious academic offence. Plagiarism occurs when a student submits work for credit that includes the words, ideas, or data of others, without citing the source from which the material is taken. Plagiarism can be the deliberate use of a whole piece of work, but more frequently it occurs when students fail to acknowledge and document sources from which they have taken material according to an accepted manuscript style (e.g., APA, CSE, MLA, etc.). Students may use sources which are public domain or licensed under Creative Commons; however, academic documentation standards must still be followed. Except with explicit permission of the instructor, resubmitting work which has previously received credit is also considered plagiarism. Students who plagiarize material for assignments will receive a mark of zero (F) on the assignment and may fail the course. Plagiarism may also result in dismissal from a program of study or the College.

YUKON FIRST NATIONS CORE COMPETENCY

Yukon College recognizes that a greater understanding and awareness of Yukon First Nations history, culture and journey towards self-determination will help to build positive relationships among all Yukon citizens. As a result, to graduate from ANY Yukon College program, you will be required to achieve core competency in knowledge of Yukon First Nations. For details, please see www.yukoncollege.yk.ca/yfnccr.

ACADEMIC ACCOMMODATION

Reasonable accommodations are available for students requiring an academic accommodation to fully participate in this class. These accommodations are available for students with a documented disability, chronic condition or any other grounds specified in section 8.0 of the Yukon College Academic Regulations (available on the Yukon College website). It is the student's responsibility to seek these accommodations. If a student requires an academic accommodation, he/she should contact the Learning

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Assistance Centre (LAC): lac@yukoncollege.yk.ca.

TOPIC OUTLINE

Week	Dates	Content
1	5-Sep-18	Introduction to BUS 307 in A2204
2	10-Sep & 12-Sep	Introduction to Hypothesis Testing & Excel (Ch. 11)
3	17-Sep & 19-Sep	Analysis of Variance (Ch. 14)
4	24-Sep & 26-Sep	Analysis of Variance & Chi-Squared Tests (Ch. 15)
5	1-Oct & 3-Oct	Chi-Squared Tests
6	10-Oct	Midterm (Chapters 11, 14, and 15)
7	15-Oct & 17-Oct	Simple Linear Regression and Correlation (Ch. 16)
8	22-Oct- & 24-Oct	Simple Linear Regression and Correlation
9	29-Oct & 31-Oct	Multiple Regression (Ch. 17)
10	5-Nov & 7-Nov	Model Building (Ch. 18)
11	14-Nov	Lab (Ch. 17 & 18)
12	19-Nov & 21-Nov	Time-Series Analysis/Forecasting (Ch. 20)
13	26-Nov & 28-Nov	Statistical Process Control & Decision Analysis (Ch.21 & 22)
14	3-Dec, 5-Dec, & 6-Dec	Presentations & Review