

**THE UNIVERSITY OF WESTERN ONTARIO
LONDON CANADA**

MOS 2242A

Section 002

Statistics

2017

1.0 CALENDAR DESCRIPTION

The purpose of this course is to introduce students to quantitative decision making skills, with an emphasis on analysis techniques used in the business world. Topics include: descriptive statistics, probability, hypothesis testing, analysis of variance, correlation and regression, time series forecasting, and survey techniques.

Antirequisite(s): Biology 2244A/B, Economics 2122A/B, 2222A/B, Geography 2210A/B, Health Sciences 3801A/B, Psychology 2810, 2820E, 2830A/B, 2885, Social Work 2205, Sociology 2205A/B, Statistical Sciences 2035, 2037A/B if taken before Fall 2010, 2141A/B, 2143A/B, 2244A/B, 2858A/B and the former 2122A/B.

Prerequisite(s): 1.0 course or equivalent from Calculus 1000A/B, 1100A/B, 1301A/B, 1501 A/B, Mathematics 1225A/B, 1228A/B, 1229A/B, 1600A/B and enrolment in BMOS.

Senate Regulations state, Aunless you have either the requisites for this course or written special permission from your Dean to enroll in it, you will be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites@.

3 lecture hours, 0.5 course

2.0 COURSE INFORMATION

Instructor: Julie Aitken Schermer, Ph.D.

Office: 4429 Social Science Centre

E-mail: jharris@uwo.ca

Office Hours: Mondays 10am-12noon
Tuesdays 1:30pm-2:30pm

Telephone: 519-661-2111 ext 84699

Day and Time of Lectures: Tuesdays 9:30am - 12:30pm

Location of Lectures: VAC 100

3.0 TEXTBOOK

Bowerman, B. L., Schermer, J. A., Johnson, A. M., & O=Connell, R. T. (2014). Business statistics in practice (3rd Canadian ed.). New York, NY: McGraw-Hill.
[ISBN 0-07-133960-4]

4.0 COURSE OBJECTIVES

This course is designed to introduce students to statistical applications related to the business world.

4.1 COURSE FORMAT

The course format will consist of lectures. Questions and discussions are desired and encouraged.

5.0 EVALUATION

There are 3 exams in this course.

Exam #	Percentage of Course Grade
1	20%
2	35%
3	45%

Exams are **multiple choice in format**. Each exam, in total, will be scheduled for **two hours**, consist of **60 questions**, and are **closed book examinations**. **Dictionaries are NOT allowed into the examinations**.

Only non-programmable calculators will be allowed into the exams. If you are unsure, please ask your professor to check your calculator.

Students are responsible for material covered in the lectures as well as the assigned chapters/sections in the text. Exams 1 and 2 will be in class time. The third exam will be scheduled during the exam period. Exams will not be returned to students but may be reviewed in the instructor=s office.

Students are **REQUIRED TO COMPLETE ALL COMPONENTS** of this course. There are no exceptions to this. AExtra assignments@ to improve grades will **NOT** be allowed.

Exams will be scored using the program AScan Exam@ which examines the answer sheets for Aunusual@ coincidences in the pattern of answers given which may be indicative and used as supporting evidence of cheating. Grades will **not** be adjusted on the basis of need. It is important to monitor your performance in the course. **Remember:** *You* are responsible for your grades in this course.

6.0 STUDY SCHEDULE

September 12 **Chapter 1 - Introduction to Business Statistics (sections 1.1 to 1.6)**

September 19 **Chapter 2 - Descriptive Statistics (sections 2.1 to 2.5, 2.7, and 2.8)**
Chapter 3 - Probability (sections 3.1 and 3.2 only)

September 26 **Chapter 4 - Discrete Random Variables (sections 4.1 to 4.3 only)**
Chapter 5 - Continuous Random Variables
(sections 5.1, 5.3, and 5.4 only)
Exam review

October 3 - EXAM 1 - IN CLASS (12 questions per chapter = $12 \times 5 = 60$ questions)

Fall Reading Week ~ October 9-13, 2017

October 17 **Chapter 6 - Sampling Distributions (section 6.1 only)**
Chapter 7 - Hypothesis Testing (sections 7.1, 7.2, & 7.4)

October 24 **Chapter 8 – Comparing Population Means and Variances using t-Tests and F Ratios (sections 8.1 to 8.4)**

October 31 **Chapter 9 - Confidence Intervals (sections 9.1 and 9.2)**

November 7 **Chapter 14 - Chi-Square Tests (sections 14.1 and 14.2)**
Exam review

November 14 - EXAM 2 - IN CLASS (12 questions per chapter = $12 \times 5 = 60$ questions)

November 21 **Chapter 10 - Experimental Design and Analysis of Variance (sections 10.1, 10.2, and 10.4)**

November 28 **Chapter 11 - Correlation Coefficient and Simple Linear Regression Analysis (sections 11.1 to 11.11)**
Chapter 12 - Multiple Regression (sections 12.1 to 12.9)

December 5 **Chapter 16 - Time Series Forecasting (sections 16.1, 16.2, 16.6, and 16.7)**
Exam review

EXAM 3 - SET BY REGISTRAR=S OFFICE - December 10-21, 2017
(15 questions per chapter = $15 \times 4 = 60$ questions)

7.0 UNIVERSITY POLICY REGARDING ILLNESS

The University recognizes that a student=s ability to meet his/her academic responsibilities may, on occasion, be impaired by medical illness. Illness may be acute (short term), or it may be chronic (long term), or chronic with acute episodes. The University further recognizes that medical situations are deeply personal and respects the need for privacy and confidentiality in these matters. However, **in order to ensure fairness and consistency for all students, academic accommodation for work representing 10% or more of the student=s overall grade in the course shall be granted only in those cases where there is documentation indicating that the student was seriously affected by illness and could not reasonably be expected to meet his/her academic responsibilities.**

Documentation shall be submitted, as soon as possible, to the appropriate Dean=s office (the Office of the Dean of the student=s Faculty of registration/home Faculty) together with a request for relief specifying the nature of the accommodation being requested. These documents will be retained in the student=s file, and will be held in confidence in accordance with the University=s Official Student Record Information Privacy Policy.

Once the petition and supporting documents have been received and assessed, appropriate academic accommodation shall be determined by the Dean=s Office in consultation with the student=s instructor(s). Academic accommodation may include extension of deadlines, waiver of attendance requirements for classes/labs/tutorials, arranging Special Exams or Incompletes, re-weighting course requirements, or granting late withdrawals without academic penalty.

Academic accommodation shall be granted only where the documentation indicates that the onset, duration and severity of the illness are such that the student could not reasonably be expected to complete his/her academic responsibilities. (Note B it will not be sufficient to provide documentation indicating simply that the student Awas seen for a medical reason@ or Awas ill.@)

Whenever possible, students who require academic accommodation should provide notification and documentation **in advance of due dates, examinations,** etc. Students must follow up with their professors and their Academic Counselling office in a timely manner.

In the case of a final examination in the course, the student must arrange for a Special Examination or Incomplete through their Dean's office, for which you will be required to provide acceptable documentation.

If you feel that you have a medical or personal problem that is interfering with your work, you should contact your instructor and the Faculty Academic Counselling Office as soon as possible. Problems may then be documented and possible arrangements to assist you can be discussed at the time of occurrence rather than on a retroactive basis. In general, retroactive requests for grade revisions on medical or compassionate grounds will not be considered.

7.1 MAKE-UP EXAMINATIONS

The student must write a make-up exam. The make-up exam differs in format from the original exam and would be scheduled before or at the completion of the course. Make-up examinations will be of the **true/false** nature **with guessing penalty** in which 0.5 marks are deleted from the number correct for *each* incorrect answer.

This format equates the grade a student would achieve if they randomly guessed on a multiple choice exam, which would result in a grade of approximately 20-25%. If a student randomly guessed on a true/false exam, they would achieve a grade of 50%. Thus the guessing penalty then equates the grade due to guessing alone to 25%.

7.2 ATTENDANCE

It is expected that students will attend all classes. The professor does not provide access to lecture notes. Students are encouraged to obtain missed lecture notes from a fellow student.

8.0 UNIVERSITY POLICY ON CHEATING & ACADEMIC MISCONDUCT

Cheating on exams will not be tolerated; students are referred to the university policy on scholastic offenses (see section 9.0 below). Looking at the test of another student, allowing another student to view your exam, or obtaining information about a test in advance are all examples of cheating. Students found cheating will receive a zero (0%) on that exam. A number of safeguards will be employed to discourage cheating. For example, examination supervisors (proctors) of the tests may ask students to move to another seat during the exam, cover their paper, avert their eyes from other students' papers, remove baseball caps, etc. This is not meant as a personal affront nor as an accusation of cheating, rather as vigilant attempts at proctoring. A copy of guidelines about how to avoid cheating can be obtained from the office of the Ombudsperson, Room 3135 University Community Centre, (519) 661-3573.

Students are responsible for understanding the nature of and avoiding the occurrence of plagiarism and other academic offenses. Students are urged to read the section on Scholastic Offenses in the Academic Calendar. Note that such offenses include plagiarism, cheating on an examination, submitting false or fraudulent assignments or credentials, impersonating a candidate, or submitting for credit in any course without the knowledge and approval of the instructor to whom it is submitted, any academic work for which credit has previously been obtained or is being sought in another course in the University or elsewhere. If you are in doubt about whether what you are doing is inappropriate, consult your instructor. A claim that "you didn't know it was wrong" will not be accepted as an excuse.

The penalties for a student guilty of a scholastic offense include refusal of a passing grade in the assignment, refusal of a passing grade in the course, suspension from the University, and expulsion from the University.

9.0 PROCEDURES FOR APPEALING ACADEMIC EVALUATIONS

In the first instance, all appeals of a grade must be made to the course instructor (informal consultation). If the student is not satisfied with the decision of the course instructor, a written appeal must be sent to the Program Director or Designate of the BMOS/BACS program. If the response of the Director is considered unsatisfactory to the student, he/she may then appeal to the Dean of the Faculty in which the course of program was taken. Only after receiving a final decision from the Dean, may a student appeal to the Senate Review Board Academic. A Guide to Appeals is available from the Ombudsperson's Office.

10.0 STUDENT RESPONSIBILITIES

Material covered in lectures will not always be the same as material covered in the textbook. These two sources should be viewed as complimentary and not redundant. As such, students who want to do well in this course are **strongly encouraged** to attend lectures on a regular basis. Please note that the instructor will not be providing copies of lectures notes or overheads. Therefore, if you miss a lecture, you should try to obtain this material from another student.

In this class, some students may be unaware that their private discussions are distracting to other people. If you feel that students are distracting your attention from the material, then you should ask them to be quiet. If you feel uncomfortable doing this (or the problem persists), then please see the instructor. In addition, please avoid engaging in private discussions with other students during the lectures.

To avoid unnecessary distractions, please arrive to each class on time.

10.1 SUPPORT SERVICES

The Registrar's office can be accessed for Student Support Services at <http://www.registrar.uwo.ca>

Student Support Services (including the services provided by the USC listed here) can be reached at: <http://westernusc.ca/services/>

Student Development Services can be reached at: <http://www.sdc.uwo.ca/>

Students who are in emotional/mental distress should refer to Mental Health@Western <http://www.uwo.ca/uwocom/mentalhealth/> for a complete list of options about how to obtain help.

11.0 Accessibility Statement

Management and Organizational Studies strives at all times to provide accessibility to all faculty, staff, students and visitors in a way that respects the dignity and independence of people with disabilities. Please contact the course instructor if you require material in an alternate format or if you require any other arrangements to make this course more accessible to you. You may wish to contact Services for Students with Disabilities (SSD) at 661-2111 #82147 for any specific questions regarding an accommodation. More information about "Accessibility at Western" is available at: <http://accessibility.uwo.ca>.

12.0 MOS Grade Policy

The MOS Program has a grade policy which states that for courses in the 1000-2999 range, the class average must fall between 65% and 70% for all sections of a course taught by the same instructor. In very exceptional circumstances only, class averages outside this range may be approved by the Assistant Director or Director. Class averages are not grounds for appeal.

13.0 OTHER ISSUES

Short Absences.

If you miss a class due to minor illness or other problems, check your course outlines for information regarding attendance requirements and make sure you are not missing a test or exam. Cover any readings and arrange to borrow the missed lectures notes from a classmate.

Extended Absences.

If you are absent more than approximately two weeks or if you get too far behind to catch up, you should consider reducing your workload by dropping one or more courses. The Academic Counsellors can help you to consider the alternatives. At your request, they can also keep your instructors informed about your difficulties.

Academic Concerns.

If you are in academic difficulty, it is strongly recommended that you see your academic counsellor.

12.0 OTHER INFORMATION

- Bring student identification to exams.
- Nothing is to be on/at one's desk during an exam except a pencil, an eraser, and the individual's student card (and a non-programmable calculator)
- Do not wear baseball caps to exams
- Do not bring cassette/CD players, cell phones, beepers, etc. to exams

For The University of Western Ontario Senate Regulations, please see the Handbook of Academic and Scholarship Policy at: <http://www.uwo.ca/univsec/handbook/>