
MOS 2242B Statistics for Management and Organizational Studies
Course Outline: Section – 005 / Winter 2015

1. CALENDAR DESCRIPTION

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

3 lecture hours, 0.5 course.

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, 1501A/B; Mathematics 1225A/B, 1228A/B, 1229A/B, 1600A/B; and enrolment in BMOS.

Senate Regulations state: “Unless 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”.

2. INSTRUCTOR INFORMATION

Instructor: Livia Veselka
Office: SSC 9336
Office Hours: Tuesdays, 9:30AM-12:30PM; other meeting times are available by appointment
E-mail: lveselka@uwo.ca
Telephone: 519-661-2111, ext. 84050
Website: <https://owl.uwo.ca/portal/site/bec68d95-3f58-4031-9410-249362d32d3f>
(MOS 2242B 005 FW14 header in OWL)

2.1 Additional Assistance

Stats Help Centre

- Available free of charge to Western students (offered by the Dept. of Statistical & Actuarial Sciences)
- WSC 250
- Monday to Friday 8:30AM-5:30PM

Tutor Referral Service

- Offered by the Dept. of Statistical & Actuarial Sciences
- <http://www.stats.uwo.ca/modules/undergraduate/wrap.php?id=28>
- MOS Dept. and the instructor do not maintain a list of tutors

3. COURSE INFORMATION

Lecture Day and Time: Mondays; 9:30AM-12:30PM (3 hours)
Lecture Location: UCC 65

3.1 Textbook and Slides

Required:

Bowerman, Aitken Schermer, Johnson, O'Connell & Murphree (2014). Business Statistics in Practice (3rd Canadian ed.). New York, NY: McGraw-Hill. [ISBN 978-0-07-133960-5]

There is no need to bring the textbook to lectures, unless you would like to have it there as an additional reference. Instead, **please bring a copy of the lecture slides to each lecture**, either in hard-copy form or on your computer. The lecture slides will be made available to you through the course site on OWL.

3.2 Course Objectives

Rooted in principles of the **evidence-based management (EBM)**, this course will focus on enhancing students' ability to obtain and evaluate statistical evidence, which is critical for making a variety of business decisions and policies.

3.3 Course Format

The course format will consist of lectures. There are no labs or tutorials. Material covered in lectures will not always be the same as material covered in the textbook. These two sources should be viewed as complementary and not redundant. As such, students who want to do well in this course are **strongly encouraged** to attend lectures on a regular basis. If students miss a lecture for any reason, it is their responsibility to catch up.

3.4 Evaluation

There are 3 exams in this course:

- Exam 1 = 20%
- Exam 2 = 35%
- Exam 3 = 45%

The Dan Program has a grade policy which states that for courses in the 2000 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 the Director. Class averages are not grounds for appeals.

4. EXAM INFORMATION

All exams are **multiple-choice** in format, and are **closed-book**. Each exam will be scheduled for **two hours**.

Students are allowed to bring non-programmable calculators to the exams. Calculators that are not suitable for the course's exams will be removed from the owner. If you are not sure about the suitability of your calculators, please show it to the instructor before the exam for approval.

Each exam will have **both** conceptual and calculation questions. The following types of questions could come up:

- definitions/descriptions of terminology, theoretical concepts, analysis methods/procedures, formulas, assumptions, distributions, degrees of freedom, etc.
- graphs and charts: definitions, descriptions, components, process/method of building a graph/chart, interpretation of what the graph/chart shows, etc.
- calculation based on formulas
- interpretation of numbers (e.g., calculation result)
- interpretation of computer output (for Chapters 10, 11, 12 & 16 only)
- understanding of choice of formulas, methods, graphs/charts, etc. (e.g., when and why would you use one formula over another?): pay attention to the type of data/scenario/assumptions

Students are responsible for material covered in the lectures as well as the assigned chapters/sections in the textbook. Exams 1 and 2 will be written in class. 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.

Exams are **not cumulative** of previous exam coverage. Hence, students are required to write all three exams in this course. Extra assignments to improve grades will **not** be provided.

4.1 Scantron Sheets

Student answers for multiple choice questions will be submitted on a scantron sheet. The students must fill in one and only one oval per question on the scantron sheet. Blank ovals will receive zero marks. Two or more filled ovals will also receive zero marks.

The scanner may not recognize lightly coloured or half-filled/half-erased ovals and treat them as blanks. The scanner reads the scantron sheet best when the students use quality HB pencils, do not doodle anywhere on their sheets, and use white erasers. It is the students' responsibility to fill in the ovals completely.

Multiple choice questions in the exams will be processed via computer software and may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

4.2 How to Prepare

- Review all corresponding lecture slides/examples.
- Understand all corresponding textbook sections.
- Work through the exercise questions in the textbook.

Note: No past exam questions are available as review materials.

4.3 What to Bring

- student ID
- quality HB pencils (no pens!) and white erasers
- non-programmable, no-statistical-formula calculators
- no formula sheets; no study notes; no scrap paper; no textbook
- no dictionaries
- no cell phones, laptops, tablets, etc. on person or on desk during the exam

4.4 Exam Result

Exam marks will be made available to students on OWL. Exam papers will not be returned to students but may be reviewed in the instructor's office during office hours.

The weight (i.e., % of course grade) of each exam will not be adjusted. Extra assignments to improve grades will not be available. Grades will not be adjusted on the basis of need.

4.5 Missed Exams

Missed exams will receive **zero marks** unless a legitimate and documented excuse is presented by the student, and the student writes a make-up exam that is scheduled by the instructor. If you miss an exam, please follow the steps below:

Step 1: If you miss an exam for any reason, you must e-mail the instructor as soon as you are able about the reason why you missed the exam.

Step 2: You must report to the Social Science Academic Counselling (SSAC) Office (SSC 2105) as soon as you are able with proper documentation.

Step 3: After the instructor receives a notification from the SSAC Office, the instructor will then e-mail you to schedule a make-up exam.

4.6 Make-Up Examinations

There are no predetermined make-up dates in this course, and make-up exams will not be arranged prior to the original exam date.

A make-up exam will be arranged when there is an **exam conflict**. The university policy states that an exam conflict consists of having **3 exams within 23 hours**.

If it is not feasible to schedule a make-up exam before the next exam, the make-up exam can be scheduled even after the next exam. For example, a make-up for Exam 1 should ideally be scheduled before the Exam 2 date; if that is not possible (e.g., prolonged illness), the make-up for Exam 1 can be written after the Exam 2 date or even after the Final Exam, as long as the student has SSAC Office approval.

Students are required to write all 3 exams in this course. The weight (i.e., % of course grade) of each exam will not be adjusted or shifted. A missed exam will receive zero marks unless the student writes a make-up exam.

5. LECTURE SCHEDULE

Before coming to the lecture, it is strongly recommended that students skim through the corresponding textbook sections. After each lecture, it is strongly recommended that students read the corresponding textbook sections and understand all concepts covered there. It is also strongly recommended that students promptly attempt the corresponding end-of-section exercise questions .

The following schedule is a guideline only and subject to change.

Lecture	Date	Chapters	Textbook sections (= exam coverage)
1	Jan. 5	<i>Introduction to the course</i> Chapter 1: Intro to Business Statistics	1.1, 1.2, 1.3, 1.4, 1.5, 1.6
2	Jan. 12	Chapter 2: Descriptive Statistics Chapter 3: Probability	2.1, 2.2, 2.3, 2.4, 2.5, 2.7, 2.8 3.1, 3.2
3	Jan. 19	Chapter 4: Discrete Random Variables Chapter 5: Continuous Random Variables	4.1, 4.2, 4.3 5.1, 5.2, 5.3
	Jan. 26	Exam 1 9:30AM-11:30AM Location TBD	10 questions from <u>each</u> of Chapters 1, 2, 3, 4, 5 -50 questions in total -20% of final grade
4	Feb. 2	Chapter 6: Sampling Distributions Chapter 7: Hypothesis Testing	6.1 7.1, 7.2, 7.4
5	Feb. 9	Chapter 8: Comparing Population Means and Variances Using <i>t</i> Tests and <i>F</i> Ratios	8.1, 8.2, 8.3, 8.4
	Feb. 16-20	Reading Week: no lecture or office hours	
6	Feb. 23	Chapter 7/8: Effect Sizes Chapter 9: Confidence Intervals	7.7, 8.1 9.1, 9.2, 9.5
7	March 2	Chapter 14: Chi-Square Tests	14.1, 14.2
	March 9	Exam 2 9:30AM-11:30AM Location TBD	10 questions from <u>each</u> of Chapters 6, 7, 8, 9, 14 -50 questions in total -35% of final grade
8	March 16	Chapter 10: Experimental Design and Analysis of Variance	10.1, 10.2, 10.4
9	March 23	Chapter 11: Correlation Coefficient and Simple Linear Regression Analysis	11.1, 11.2, 11.3, 11.4, 11.5, 11.6, 11.7, 11.8, 11.9, 11.10, 11.11
10	March 30	Chapter 12: Multiple Regression	12.1, 12.2, 12.3, 12.4, 12.5, 12.6, 12.7, 12.8, 12.9
11	April 6	Chapter 16: Time Series Forecasting No live lecture this week! I will be away at a conference and so this lecture will be made available on Sakai/OWL as a video lecture (narrated slides).	16.1, 16.2, 16.6, 16.7
Exam period (April 11-30)		Exam 3 (Final) As scheduled by the Registrar's office (2 hours)	15 questions from <u>each</u> of Chapters 10, 11, 12, 16 -60 questions in total -45% of final grade

5.1 Other Important Dates

January 5	Winter-term classes begin
January 13	Last day to add Psych 2550B
February 16	Family Day
March 7	Last day to drop Psych 2550B without academic penalty
April 3	Good Friday
April 9-10	Study days

6. ACCESSIBILITY

DAN 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 also wish to contact Services for Students with Disabilities (SSD) at 519-661-2111 ext 82147 for any specific question regarding an accommodation. More information about "Accessibility at Western" is available at: <http://accessibility.uwo.ca>

7. UNIVERSITY POLICIES

7.1 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 supplied (see below for process) 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 http://www.uwo.ca/univsec/pdf/academic_policies/general/privacy.pdf.

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: it will not be sufficient to provide documentation indicating simply that the student was seen for a medical reason or was ill.)

A form to be completed by off-campus physicians is available at:
http://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf

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.

7.2 Cheating and 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 251 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.

7.3 Procedures for Appealing Academic Evaluation

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 Assistant Program Director or Designate of the BMOS program. If the response of the Assistant 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.

7.4 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.health.uwo.ca/mental_health/ for a complete list of options about how to obtain help.

7.5 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.

7.6 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.

7.7 Academic Concerns

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

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