



AMBROSE
UNIVERSITY COLLEGE

STA 210 - INTRODUCTION TO BUSINESS STATISTICS
FALL 2012

Lecture: Tuesdays and Thursdays 1:00 PM-2:15 PM A2131
Lab: Mondays 4:00 PM-5:15 PM A2131

Calendar Description: (3)A

This course is designed to give students a basic understanding of descriptive and inferential statistics. Emphasis is placed on practical application and students will learn to analyze and interpret basic statistical research. Topics include collection and presentation of data, descriptive statistics, introduction to probability theory, estimation, hypothesis testing, and linear regression. Students will also learn to use computer software to analyze data.

Prerequisite: Math 30
Instructor: John Wiest
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Office: L2050
Office Hours: Wed 12:00 PM-2:30 PM, or by appointment

Text: *Applied Statistics in Business and Economics (Canadian Edition)*
Doane, Seward, Aneja, & Miller
McGraw-Hill Ryerson

The text is bundled with a CD: *Student CD-ROM* which contains tutorials and a statistical program called Megastat. Megastat is software which is an Excel add-on. It permits sophisticated computer analysis that enhances the learning process. Each purchaser of a copy of the text (bundled with the CD) can install the software on his/her personal computer at no extra cost. Megastat is also installed on Campus laptop computers, some in the Commons area and some that will be brought to the lab sessions by the course instructor. Students will be required to complete some assignments using Megastat.

Expected Learning Outcomes

The main purpose of the course is to provide students with an understanding of common types of statistical analysis and with skill in the interpretation of the information that is produced by these types of statistical analysis. Students will also experience the use of popular computer software to process and analyze data.

Course Information:

This course provides business students majoring in economics, finance, marketing, accounting, management, and other fields of business administration, with an introductory survey of many business applications of descriptive and inferential statistics. Statistics, as studied in this course, are a means of converting data into useful information that can be used to assist the business decision maker in making more thoughtful, information-based decisions. Main topics include: the different levels of data, sampling, techniques for summarizing and depicting data, techniques to describe data, principles of probability,

probability distributions, sampling distributions, constructing confidence intervals, hypothesis testing, simple regression analysis, and an overview of non-parametric methods.

The course has lecture and lab components. Classroom time will be devoted mainly to explanation and discussion of theory and methods. Lab time will be devoted to demonstration of statistical software applications by the instructor, and to hands-on practice by the students and/or to completion of assignments (or, occasionally, to the completion of a lecture or the writing of a quiz).

Additional Information

As discussion of topics proceeds, the instructor may assign research of related statistics and other information. On-line sources of the statistics and other information may be accessed from the student's personal computer or from computers at Ambrose University College.

As noted above, some lab sessions may be used to finish coverage of materials that couldn't be completed in the lecture classroom and some lab sessions may be devoted to the writing of quizzes. The lab sessions are an integral part of the course – attendance at lab sessions is *not* to be regarded as optional.

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Other Course Materials

A hand-held electronic calculator with *statistical functions* is required. While a particular calculator (make and model) cannot be specified, it is imperative that the calculator have statistical capabilities comparable to the TI BA II Plus (the officially-adopted calculator for course STA 210). Support for the TI BA II Plus calculator is provided by the course text and instructor; other calculators are not similarly supported. The course instructor will endeavor to assist students with calculator applications but, because of the wide variety of calculators in use, each student is ultimately responsible for knowing how to use the calculator that he/she brings to the course.

The CD which is bundled with the text contains statistical software (for Microsoft Windows) which should ideally be installed on the student's personal computer. As noted above, the software has also been installed by Ambrose IT staff on campus computers which are usually accessible to students in the Commons area or in the Lab.

The instructor will provide some handout readings and examples (in hardcopy or as pdf files which can be accessed via MOODLE) as the course progresses.

Attendance

The general expectation is that students will attend all classes and lab sessions in which they are registered. A combination of low academic performance and notable absences from classes or lab sessions may be brought to the attention of the program head

Course Schedule

The following is a Broad Course Schedule.

TOPIC	TEXT REFERENCE
Overview of Statistics	Chapter 1
Data Collection	Chapter 2
Describing Data Visually	Chapter 3
Descriptive Statistics	Chapter 4
Probability	Chapter 5
Discrete Probability Distributions	Chapter 6
Continuous Probability Distributions	Chapter 7
Mid-Term Examination	
Sampling Distributions and Estimation	Chapter 8
One-Sample Hypothesis Tests	Chapter 9
Bivariate (Simple Linear) Regression	Chapter 13
Nonparametric Tests	Chapter 16
Final Examination	

Students are required to read in the above-listed chapters of the textbook in order to be prepared for the lectures, discussion, and problem-solving.

As noted, eleven chapters in the required text have been selected for study. These chapters cover the main topics for study, but a few sections in some chapters will be omitted from lecture and/or lab coverage. Students will be given a Readings List in the early weeks of the course which will indicate the page numbers for specific content that is **not** required for study in this course.

Course Requirements and Grading

Student performance will be evaluated in a combination of classroom participation and graded assignments, quizzes, mid-term examination, and final examination. Mark allocation is as follows:

Three Assignments	20%
Three Quizzes	25%
Mid-Term Exam	20%
Final Exam	<u>35%</u>
	100%

Students need not receive a passing grade on all components of term work and examinations in order to pass the course. However, failure to submit an assignment or write a quiz/examination, without the prior approval of the instructor, may result in an F grade for the course.

Marks for classroom/lab participation are based on the instructor's impression (cumulative through the semester) of the student's efforts to review and comprehend assigned text material, the student's classroom and lab session attitude, quality of responses to questions asked by the instructor, and quantity/quality of contributions to classroom/lab discussion. Absences from lectures and lab sessions can negatively impact marks for *participation*.

Assignments/Quizzes

The assignments will be take-home exercises. One of the quizzes may be a take-home exercise. Deadlines for completion and submission of these will be clearly indicated in advance.

Any take-home assignment/quiz submitted by a student after the due date will be penalized by 50%, but if submitted after answer keys have been posted, or after any graded materials have been returned to any students, a grade of 0% will be awarded.

All assignment and quiz papers must include the student's name (printed clearly).

Note that in order for a student to be eligible to write the final examination, he/she must submit all take-home papers by the last day of lectures and must have written all in-class quizzes on the scheduled dates. The mark for an assignment or quiz which is *missed with a legitimate reason* (typically illness, evidenced by a Doctor's note) will normally be spread across (transferred to) the other quizzes/assignments.

Mid-Term Examination

The mid-term examination will be 1 1/4 hours (75 minutes) in length. It will be written during regular class and can cover all materials included in the course up to the date of the exam.

A grade of 0% will be awarded for a mid-term examination missed *without a legitimate reason*. If the mid-term examination is missed *with a legitimate reason*, a make-up mid-term examination will be arranged within one week. If the instructor determines that this arrangement is not practical, the final grade will be reallocated as follows:

Three Assignments	25%
Three Quizzes	30%
Final Exam	<u>45%</u>
	100%

Final Examination

The final examination will be comprehensive (i.e., can cover any materials included in the course during the semester, but emphasis will be on the material covered in the last half of the course). The final examination will have a maximum writing time of three hours (180 minutes).

Graded final examinations will be available for supervised review at the request of the student.

Available Letters for Course Grades

<u>% Grade</u>	<u>Letter Grade</u>	<u>Description</u>
95% to 100%	A+	
90% to 94%	A	Excellent
85% to 89%	A-	
80% to 84%	B+	
76% to 79%	B	Good

72% to 75%	B-	
68% to 71%	C+	
64% to 67%	C	Satisfactory
60% to 63%	C-	
55% to 59%	D+	
50% to 54%	D	Minimal Pass
0% to 49%	F	Failure

Important Notes

All in-class quizzes and exams are closed-book (no textbook, computerized personal organizers, class notes, handout materials, assignment/quiz/exam papers, etc. are permitted) unless advised otherwise by the instructor.

Allowed aids in all in-class quizzes include:

- a hand-held, non-programmable, statistical calculator
- statistical tables (provided by the instructor, as needed)
- one sheet of notes (8.5 by 11-inch paper, both sides) containing formulae and notes **generated by the student**. Photocopied pages not permitted.

Allowed aids in the mid-term and final exams include:

- a hand-held, non-programmable, statistical calculator
- statistical tables (provided by the instructor, as needed)
- two sheets of notes (8.5 by 11-inch paper, both sides) containing formulae and notes **generated by the student**. Photocopied pages not permitted.

Students are reminded that quizzes and examinations will be actively invigilated. Students may only bring to a test room items stipulated by the instructor to be required or allowed for the completion of the examination. All non-essential items (including, but not limited to, hats, coats, gloves, knapsacks, purses, and electronic devices other than approved calculators) must be left in an area of the examination room designated by the instructor. All cell phones and other unauthorized electrical devices **MUST** be turned off during examinations. Failure to comply may result in a failing grade for the examination.

Important Dates

<u>Week of</u>	<u>Topic</u>
Sept. 05	First day of Classes
Sept. 16	Last day to withdraw from a class without academic penalty
Sept. 26	Spiritual Emphasis Day (No Classes)
Oct. 8	Thanksgiving (NO Classes)
Oct. 29	Last day to request revised time for a final examination
<i>Oct. 15-Oct. 20</i>	<i>MIDTERM this week.</i>
Nov. 12	Remembrance day (No classes)
Nov. 12	Last day to withdraw from courses without academic penalty
Dec. 3	Last class

FRIDAY DECEMBER 07 FINAL EXAM 1:00PM A2210

Please note that final grades will be available on your student portal. Printed grade sheets are no longer mailed out.

It is the responsibility of all students to become familiar with and adhere to academic policies as stated in the Student Handbook and Academic Calendar. Personal information, that is information about an individual that may be used to identify that individual, may be collected as a requirement as part of taking this class. Any information collected will only be used and disclosed for the purpose for which the collection was intended. For further information contact the Privacy Compliance Officer at privacy@ambrose.edu.

Although extensions to coursework in the semester are at the discretion of the instructor, students may not turn in coursework for evaluation after the last day of the scheduled final examination period unless they have received permission for a "Course Extension" from the Registrar's Office. Requests for course extensions or alternative examination time must be submitted to the Registrar's Office by the appropriate deadline (as listed in the Academic Calendar <http://www.ambrose.edu/publications/academiccalendar>). Course extensions are only granted for serious issues that arise "due to circumstances beyond the student's control."

We are committed to fostering personal integrity and will not overlook breaches of integrity such as plagiarism and cheating. Academic dishonesty is taken seriously at Ambrose University College as it undermines our academic standards and affects the integrity of each member of our learning community. Any attempt to obtain credit for academic work through fraudulent, deceptive, or dishonest means is academic dishonesty. Plagiarism involves presenting someone else's ideas, words, or work as one's own. Plagiarism is fraud and theft, but plagiarism can also occur by accident when a student fails or forgets to give credit to another person's ideas or words. Plagiarism and cheating can result in a failing grade for an assignment, for the course, or immediate dismissal from Ambrose University College. Students are expected to be familiar with the policy statements in the current academic calendar and the student handbook that deal with plagiarism, cheating, and the penalties and procedures for dealing with these matters. All cases of academic dishonesty are reported to the Academic Dean and become part of the student's permanent record.

Course changes, including adding or dropping a course, may be made during the Registration Revision period, as outlined in the Calendar of Events. All course changes must be recorded on a Registration form, available from the Office of the Registrar. Due to circumstances such as class size, prerequisites or academic policy, the submission of a Registration form does not guarantee that a course will be added or removed from a student's registration. Students may change the designation of any class from credit to audit up to the date specified in the Calendar of Events, although students are not entitled to a tuition adjustment or refund after the Registration Revision period.

Withdrawal from courses after the Registration Revision period will not be eligible for tuition refund. Students intending to withdraw from some or all of their courses must submit a completed Registration form to the Registrar's office. The dates by which students may voluntarily withdraw from a course without penalty are listed in the Calendar of Events. A grade of 'W' will be recorded on the student's transcript for any withdrawals from courses made after the end of the Registration Revision period and before the Withdrawal Deadline (also listed in the Calendar of Events). 'W' grades are not included in grade point average calculations. A limit on the number of courses from which a student is permitted to withdraw may be imposed. Students wishing to withdraw from a course, but who fail to do so by the applicable date, will receive the grade earned in accordance with the course syllabus. A student obliged to withdraw from a course after the Withdrawal Deadline because of health or other reasons may apply to the Registrar for special consideration.

An appeal for change of grade on any course work must be made to the course instructor within one week of receiving notification of the grade. An appeal for change of final grade must be submitted to the Office of the Registrar in writing within 30 days of receiving notification of the final grade, providing the basis for appeal. A review fee of \$50.00 must accompany the appeal to review final grades. If the appeal is sustained, the fee will be refunded. Note that the review could justify an increase, no change, or a decrease in the final grade.

Students are advised to retain this syllabus for their records.