



DEPARTMENT OF BUSINESS

COURSE OUTLINE – WINTER 2015

APPLIED STATISTICS FOR BUSINESS AND ECONOMICS II

MG3120 – 3 (3-0-1) 60 HOURS

INSTRUCTOR: Charles Backman

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OFFICE HOURS:

Mon: 6:00 PM – 7:30 PM

Tues: 10:00 AM – 11:30 AM

PREREQUISITE(S)/COREQUISITE:

ST1510; BA2060 is an acceptable prerequisite for students enrolling in MG3120 to fulfill a requirement in the AU degree program.

REQUIRED TEXT/RESOURCE MATERIALS:

Groebner, David, Patrick Shannon, Phillip Fry, 2014, Business statistics – A decision making approach, 9th edition, Pearson/Prentice-Hall, 884 pp.

CALENDAR DESCRIPTION:

Statistical inference for variance; statistical inference for the means; proportions and variances from two populations; analysis of variance; non-parametric statistics; joint probability distributions; marginal and conditional distributions; covariance; correlation and independence; contingency tables; simple linear regression; multiple linear regression; nonlinear regression; and time series analysis are topics covered in the course

CREDIT/CONTACT HOURS:

This is a 3 credit course with 3 hours of lecture per week and 1 hour of lab per week . The 1 hour of lab will take place as a 2 hour lab every other week. Students are expected to attend all lectures and lab sessions.

DELIVERY MODE(S):

Lecture and laboratory

OBJECTIVES (OPTIONAL):

To understand the objectives of statistics, the information that it generates, and how the information can be used in students' business careers.

To create an awareness of different types of situations where it can be used to excel and compete in the field of business.

To develop the ability to use computer and computer software in order to present the information in a standard professional format.

TRANSFERABILITY:

**** Grade of D or D+ may not be acceptable for transfer to other post-secondary institutions. Students are cautioned that it is their responsibility to contact the receiving institutions to ensure transferability.**

EVALUATIONS:**Quizzes**

Four Quizzes – 12%

Assignments

Three assignments - 12%

Laboratories

Five Lab assignments - 20%

Exams

First Test 11%

Second Test 15%

Final Exam 30%

3rd Exam (Cumulative) During Regularly scheduled Exam Time

April 16 to April 27 FINAL EXAM (DATE TBA)

Assignment and Exam Policies:

1. Assignments will be handed in at the beginning of class on the due date.
2. Exams will be written as scheduled.

3. Final examinations will be scheduled by the Registrar during the period of normal exams in April, 2015. **Do not plan any activities during this period.**
4. Exams will take place during the time set aside for the stat labs. The exam will be a sit down and may be using a computer format.

GRADING CRITERIA:

Grades will be assigned on the Letter Grading System.

GRANDE PRAIRIE REGIONAL COLLEGE			
GRADING CONVERSION CHART			
Alpha Grade	4-point Equivalent	Percentage Guidelines	Designation
A ⁺	4.0	90 – 100	EXCELLENT
A	4.0	85 – 89	
A ⁻	3.7	80 – 84	FIRST CLASS STANDING
B ⁺	3.3	77 – 79	
B	3.0	73 – 76	GOOD
B ⁻	2.7	70 – 72	
C ⁺	2.3	67 – 69	SATISFACTORY
C	2.0	63 – 66	
C ⁻	1.7	60 – 62	
D ⁺	1.3	55 – 59	MINIMAL PASS
D	1.0	50 – 54	
F	0.0	0 – 49	FAIL
WF	0.0	0	FAIL, withdrawal after the deadline

STUDENT RESPONSIBILITIES:

Each student is expected to come to class **on time**, having read the material and completed the assignments. Note that participation marks will be based not only on the contribution made to the class by the student but also on professionalism exhibited. **Note:** The use of cell phones is unprofessional and is distracting to the instructor and fellow students.

STATEMENT ON PLAGIARISM AND CHEATING:

Refer to the College Policy on Student Misconduct: Plagiarism and Cheating at

https://www.gprc.ab.ca/files/forms_documents/Student_Misconduct.pdf

**Note: all Academic and Administrative policies are available at

<https://www.gprc.ab.ca/about/administration/policies/>

COURSE SCHEDULE/TENTATIVE TIMELINE:

Week 1 December 29 – Jan 2

- No classes

Week 2 Jan 5-9

- Introduction (Distribute course outline)
- Data collection and description

Reference: Chapter 1, 2, 3

Week 3 Jan 12-16

Hand out Quiz ONE

- Data collection and description

Reference: Chapter 1, 2, 3

- Review of some important discrete probability distribution

Reference: Chapters 5

Week 4 Jan 19-23

Hand in Quiz ONE

Hand out Quiz TWO

Hand out Assignment ONE

- The Normal distribution and other continuous probability distribution functions

Reference: Chapter 6

- Review of sampling and sampling distributions

Reference: Chapter 7

Week 5 Jan 26-30

- Review of estimation of single population parameters

Reference: Chapters 8

Hand in Assignment ONE

Week 6 Feb 2-6

Hand in Quiz TWO

- Review of hypothesis testing

Reference: Chapter 9

Week 7 Feb 9-13

Test 1 (Weeks 1 through 5)

Week 8 Feb 16-20

Reading week

Week 9 Feb 23-27

Hand out Quiz THREE

Hand out Assignment TWO

- Two sample tests

Reference: Chapter 10

- Analysis of variance

Reference: Chapter 12

Week 10 Mar 2-6

- Analysis of variance

Reference: Chapter 12

- Chi squared and non parametric tests

Reference: Chapter 11

Hand in Assignment TWO

Hand in Quiz THREE

Week 11 Mar 9-13

- **2nd Test (Weeks Six through Ten inclusive)**

Week 12 Mar 16-20

Hand out Quiz FOUR

- Bivariate analysis for quantitative variables
- Simple linear regression

Reference: Chapter 14

Week 13 Mar 23 – 27

Hand out Assignment THREE

- Linear/Multiple linear regression

Reference: Chapters 14 and 15

Week 14 Mar. 30 –April 3

Hand in Quiz FOUR

- Multiple regression

Reference: Chapter 15

Week 15 Apr 6-10

Hand in Assignment THREE

- Multiple regression model building

Reference: Chapter 15

Week 16 April 13 - 14

- Review

- **The instructor reserves the right to change or cancel any of these dates and topics.**

LABORATORY SCHEDULE

There is a 1 hour lab attached to the 3 hour lecture per week. In order to get the most out of the lab sessions, the 1 hour lab time per week will occur as a 2 hour lab every other week or as identified in the attached schedule.

There are two objectives linked to the attached laboratories: (1) review familiarity with Excel as a tool in statistical analysis; (2) Application of statistical techniques learned in class time to real life problems.

Week	Laboratory #	Topic	
One			
Two			
Three	Lab 1	Methods of describing sets of data	TBD
Four			

Five			
Six	Lab 2	Test of hypotheses and sample confidence intervals	TBD
Seven			Mid Term I
Eight	Reading Week		
Nine			
Ten	Lab 3	Comparing more than two means/Chi squared and contingency tables	
Eleven			Mid Term II
Twelve			
Thirteen	Lab 4	Simple Regression	TBD
Fourteen	Lab 5a	Multiple Regression I	TBD
Fifteen	Lab 5b	Multiple Regression II	TBD
Sixteen			

Modified: January 5, 2015