



DEPARTMENT OF BUSINESS

COURSE OUTLINE – WINTER 2013

MG 3120 – Applied Statistics for Business and Economics II

INSTRUCTOR: Charles A.
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HOURS: TBD

PREREQUISITE(S):

MS3010 or ST1510

REQUIRED TEXT/RESOURCE MATERIALS:

Groebner, David, Patrick Shannon, Phillip Fry, and Kent Smith, 2011, Business statistics – A decision making approach, 8th edition, Pearson/Prentice-Hall, 912 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. A total of 60 hours are assigned for this course. Students are expected to attend all lectures and lab sessions.

DELIVERY MODE(S):

Lecture and laboratory

OBJECTIVES:

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.**

GRADING CRITERIA:**Quizzes**

Four Quizzes – 15%

Assignments

Three assignments - 15%

Laboratories

Five Lab assignments - 20%

Exams

First Test 10%

Second Test 15%

Final Exam 25%

3rd Exam (Cumulative) During Regularly scheduled Exam Time**April 18 to April 29 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, 2013. **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.

Grades will be assigned on the Letter Grading System.

Alpha Grade	4-point Equivalent	Percentage Guidelines	Designation
A+	4	90 – 100	EXCELLENT
A	4	85 – 89	
A-	3.7	80 – 84	FIRST CLASS STANDING
B+	3.3	76 – 79	
B	3	73 – 75	GOOD
B-	2.7	70 – 72	
C+	2.3	67 – 69	SATISFACTORY
C	2	64 – 66	
C-	1.7	60 – 63	
D+	1.3	55 – 59	MINIMAL PASS
D	1	50 – 54	
F	0	0 – 49	FAIL

EXAMINATIONS:

There are three Exams in this course. The final exam is cumulative. Other exams are non cumulative to the extent that material covered in prior classes is not required to understand the current material.

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:

Please refer to the College calendar regarding plagiarism, cheating and the resultant penalties. These are serious issues and will be dealt with severely.

COURSE SCHEDULE/TENTATIVE TIMELINE:

Week 1 December 31 – Jan 4

- No classes

Week 2 Jan 7-11 (First Class is Jan. 9 – Wednesday)

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

Reference: Chapter 1, 2, 3

Week 3 Jan 14-18

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 21-25

Hand in Quiz ONE

Hand out Quiz TWO

Hand out Assignment ONE

- The Normal distribution

Reference: Chapter 6

- Review of sampling and sampling and sampling distributions

Reference: Chapter 7

Week 5 Jan 28-Feb 1 4

- Review of confidence intervals

Reference: Chapters 8

Hand in Assignment ONE

Week 6 Feb 4-8

Hand in Quiz TWO

- Review of hypothesis testing

Reference: Chapter 9

Week 7 Feb 11-15

Test 1 (Weeks 1 through 5) (Monday in Laboratory Period)

No Class on Wednesday

Week 8 Feb 18-22

Reading week

Week 9 Feb 25-Mar 1

Hand out Quiz THREE

Hand out Assignment TWO

- Two sample tests

Reference: Chapter 10

- Analysis of variance

Reference: Chapter 12

Week 10 Mar 4-8

- 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 11-15

• Review (No class Monday Morning) (Review session in Regularly scheduled Lab Period in the afternoon – Room to be determined)

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

Week 12 Mar 18-22

Hand out Quiz FOUR

- Bivariate analysis for quantitative variables
- Simple linear regression

Reference: Chapter 14

Week 13 Mar 25 – 29

Hand out Assignment THREE

- Linear/Multiple linear regression

Reference: Chapters 14 and 15

Week 14 April 1 –April 5

Hand in Quiz FOUR

- Multiple regression

Reference: Chapter 15

Week 15 Apr 8-12

Hand in Assignment THREE

- Multiple regression model building

Reference: Chapter 15

Week 16 April 15 – 16 (Tuesday)

- 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 1A	Methods of describing sets of data	TBD
Four	Lab 1B	Methods of describing sets of data	TBD
Five	Lab 2A	Single sample test of hypotheses and two sample confidence intervals and test of hypotheses	TBD
Six	Lab 2B	Single sample test of hypotheses and two sample confidence intervals and test of hypotheses	TBD
Seven	TEST I	ROOM TBA	
Eight	Reading Week		
Nine	Lab 3A	Comparing more than two means/Chi squared and contingency tables	TBD
Ten	Lab 3B	Comparing more than two means/Chi squared and contingency tables	TBD
Eleven	Review Session	Preparation for Test II	Room TBD
Twelve	Lab 4A	Simple Regression	TBD
Thirteen	Lab 4B	Simple Regression	TBD
Fourteen	Lab 5A	Multiple Regression	TBD
Fifteen	Lab 5B	Multiple Regression	TBD
Sixteen			

Modified: January 3, 2013