WILLIAM PATERSON UNIVERSITY OF NEW JERSEY
CHRISTOS M. COTSAKOS COLLEGE OF BUSINESS
DEPARTMENT OF MARKETING AND MANAGEMENT SCIENCE

Winter 2013-2014 online-December 26 – January 14

Title of course, course number, and number of credits

Business Statistics for Managers, Bus 2110, 3 credits

Instructor

Dr. Leonard Presby (V3051) Phone: (973) 720-2538; E-mail preferred: presbyL@wpunj.edu Office Hours: by appointment

Description of the course

This course covers the following: sampling distribution of the sample statistics; probability limits and tests of significance; statistical inference and confidence limits; operating characteristics curves; simple experimental design; and applied probability for decision making.

Course prerequisites – MATH 1400, MATH 140, ECON 2100, ECON 210

Textbook

ALEKS software ($50) to be provided free by the management dept on Monday or Tuesday 12/9 and 12/10 before 4pm (call first to say you are coming).

recommended-Statistical Techniques in Business and Economics – latest edition by Lind- McGraw Hill publishers

Teaching methods and student learning activities

This online course does not officially meet face to face. We will be using ALEKS.com (see below for description) , a shell-program that will serve as our vehicle for class delivery and for such purposes as posting course materials and communicating.

Student learning outcomes: By the end of this course, students should be able to:

- Explain methods for selecting a sample and define what a sampling distribution is.
- Define a hypothesis and hypothesis testing.
- Conduct a test of hypothesis about one and two population means.
- Conduct a test of hypothesis about a population mean using Student's t distribution.
- Organize data into a one-way and a two-way ANOVA table.
- Understand and interpret the terms dependent and independent variable.
- Interpret coefficient of correlation and determination and regression line.
- Describe the relationship between several independent variables and dependent variable.

Introduction:

Greetings I will explain the course requirements so you can get much out of it. We "meet" by logging on to ALEKS.COM. We do not meet face-to-face. However, my office is in Valley room 3051. Email me to make an appointment.

How Do You Get on to this Online Course?

Log on to Aleks.com as a student. Type your name & course code 4VN6P-LEK4H. Continue. You will then need a personal access code of 20

Characters. The department is providing this FREE to you. You must pick it up between the hours of 9-4 Monday 12/9 or Tuesday 9/10 from the secretary, Linda, on floor 3, Valley r3070. In this package is the "access code" you need for the class. Type it in. You are now enrolled. Note: You can check it out by going to ALEKS and viewing the website etc.

Syllabus calendar

Date	Aleks topic to do each day	Comments
12/26	Learn how to use it. Answer the 30 questions Arithmetic readiness; Standard deviation	If you have any installation problems, call **ALEKS at Phone:** (714) 619-7090
12/27	Normal distribution and probabilities	
12/30	Sample limit theorem	
12/31	Confidence intervals	
½	Sample size	***2 hours anytime on ALEKS from 6 pm to 12 pm***
1/3	type 1,2 errors	
1/6	***Test 1 online***	
1/7	Hypothesis testing	
1/8	Regression	
1/9	ANOVA; Chi square	
1/14	***Test 2 online***	2 hours anytime on ALEKS from 6 pm to 12 pm

The order of learning the ALEKS topics is by clicking on the appropriate pie section:
1. mathematical readiness 2. descriptive statistics 3. Probability 4. random variables
5.confidence intervals and hypothesis testing 6. regression 7.chi Square and nonparametric 8. anova
(I may include lecture notes in Blackboard, which are meant to complement the explanations you receive from ALEKS

Expectations of Performance:
You should log on to ALEKS each day to continue your progress and check for possible new "Announcements" or even extra credit. There are about 50 topics that you will master in the course. You can expect to spend as much time in this course as you would in a traditional one. Each topic may take anywhere from 15 minutes to more than an hour to master. Since there are only 11 classes, you may find you need to put in over 50 hours of computer time, depending on your math background. I will check daily your progress. If you do not have the time to devote to this course, I suggest you take the course in a regular semester like this spring 2014.

Policies:
Academic dishonesty could involve having a tutor or friend complete a portion of your assignments. Not adhering to the University's academic honesty policy on honesty will result in failure.

Feedback:
I will try to respond via email to any inquiries I receive **within** 24 hours, except for weekends.

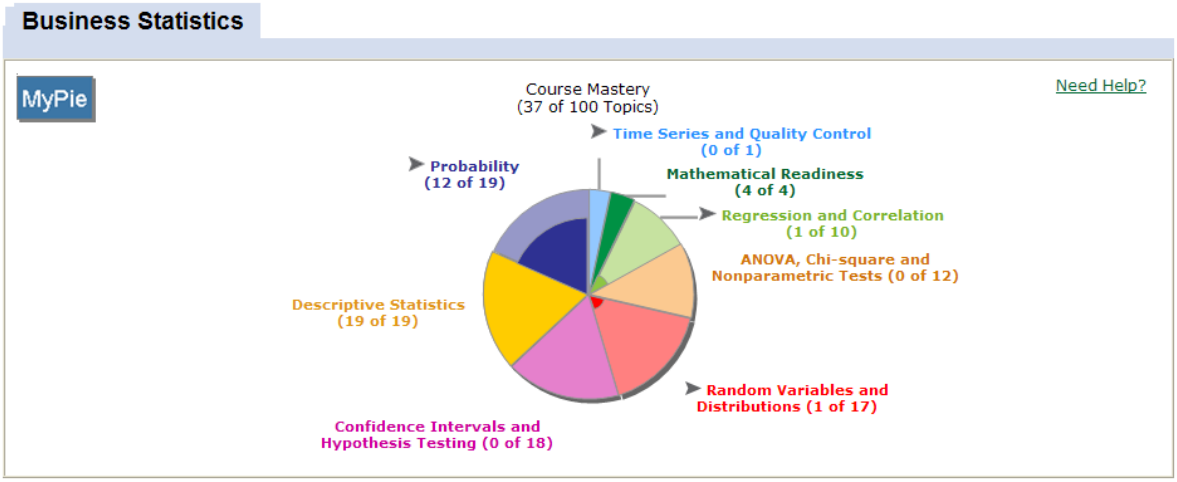
Grading: A: 93-100%; A-: 90-92%; B+: 87-89%; B: 84-86;B-: 80-83%;C+: 77-79;C: 74-76%; C-: 70-73%; D+: 67-69%; D: 64-66%; D-: 60-63%; F: <60.

Grade determined by:

Grades on online tests 1 and 2	40%
goal completion using ALEKS (there are about 50 topics)	20%
other possible homeworks	0-20%
Grade on online final	20-40%

*(ALEKS is a web-based artificial intelligence-based learning system . It uses adaptive questioning to quickly and accurately determine exactly what a student knows and doesn't know in a course. ALEKS then instructs the student on the topics she is most ready to learn. As a student works through a course, ALEKS periodically reassesses the student to ensure that topics learned are also retained. By the time the student has completed the assessment, ALEKS has developed a precise picture of her/his knowledge of the course, knowing which topics s/he has mastered and which topics s/he hasn't. The student's knowledge is represented by a multicolor pie chart. In the pie below 37 of 100 topics of a typical math course have

been mastered, at this point of the course. The dotted lines represent areas which the student can proceed to learn.



When you first log on to ALEKS, a brief tutorial shows you how to use the ALEKS answer input tools.
You then begin the ALEKS Assessment. In about an hour, ALEKS assesses your current course knowledge by asking you about 30 questions. ALEKS chooses each question on the basis of your answers to all the previous questions. Each student, and each set of assessment questions, is unique. It is impossible to predict the questions that will be asked. ALEKS avoids multiple choice questions and instead uses answer input tools that mimic what would be done with paper and pencil.
By the time you complete the assessment, ALEKS has developed a precise picture of your knowledge of the course, knowing which topics you know and which topics you don't. Your knowledge is represented by a pie chart.
You then enter the Learning Mode. There, you are offered a choice of topics that you are ready to learn. When you choose a topic to learn, ALEKS offers you practice problems that teach the topic. These problems have enough variability that you can only get them consistently correct on understanding the core principle defining the topic. If you don't understand a particular problem, you can always access a complete explanation. Once you can consistently get the problems for a given topic correct, ALEKS considers that you have learned the topic and you choose another topic to learn. As you learn new topics, ALEKS updates its knowledge map. You can observe a summary of what you know and what you are ready to learn. To ensure that topics learned are retained in long term memory, ALEKS will periodically reassess you, using the results to adjust your knowledge of the course. You cannot predict the questions ALEKS will ask. ALEKS keeps statistics that measure your learning success, namely how often you succeed at learning a concept that ALEKS offers you. If you are initially unsuccessful in learning the item, it is presented again later on. ALEKS uses no "multiple choice" questions. All questions are algorithmically generated and require a "free response." Whenever you reenter the system after a break, you automatically return to the place you were last working. This is true even if the departure was caused by unexpected loss of connectivity on the Internet or a PC crash. A comprehensive message center allows you to communicate with me about the content using subject-appropriate notation.

10/20/2013