

# **DSC 670-123 Summer 2013**

## **Statistical Methods**

### **Prof. A. Wittenstein**

**\*\*This section of DSC 670 is only for students in Cohort 13 of the GOAL accelerated MBA program.\*\***

#### **Contact Information**

Office: Post Hall 103

Email: [Wittenstein@adelphi.edu](mailto:Wittenstein@adelphi.edu)

Course Web Page: <http://www.adelphi.edu/~wi16133/dsc670>

Office Hours: Sa 12:00pm-1:00pm, in Hagedorn 209

Other days/times by appointment, in Post 103

#### **Class Meetings**

Saturdays 8:00am-12:00pm, Hagedorn 209 (Sa 6/29 → Sa 8/24)

AND at least 8 hours of online instructional activities

**\*\*If the University is closed for an extended period due to an emergency, log on to Moodle for instructions and possible assignments.**

#### **Course Description**

Organizations confront a myriad of problems characterized by uncertainty in the environment. The decision making process requires models, analysis, and solutions that account for this uncertainty, and statistics provides a methodology that assists in the resolution of those issues. Topics include:

- Descriptive Statistics
- Probability and Probability Distributions
- Normal Distributions
- Sampling Distributions
- Parameter Estimation (by Confidence Intervals)
- Hypothesis Testing
- Linear Regression and Correlation

**\*\*An up-to-date course calendar of topics and assignments is on Moodle.**

#### **Course Learning Goals**

Given the appropriate data, students will:

- create a graphical display (i.e. bar chart, pie chart, stem-and-leaf display, histogram, box plot, scatterplot).
- calculate a numerical summary measure (i.e. mean, median, variance, standard deviation, range, IQR).
- calculate the probability of a given event
- identify the probability distribution it follows
- identify if the sampling distribution is approximately normal
- calculate a confidence interval
- conduct a hypothesis test
- find the equation of a regression line

#### **Grading**

Assignments 30% Midterm Exam 20% Attendance & Participation = 10%

Weekly Quizzes 20% Final Exam 20%

**\*At the end of the semester, letter grades will be assigned according to the following scale:**

A+ = 97 and up A = 93-96 A- = 90-92 B+ = 87-89 B = 83-86 B- = 80-82

C+ = 75-79 C = 70-74 C- = 65-69 F = 0-64

## Attendance

**Attendance is required.** After one absence, your grade will be lowered by one-third of a grade (e.g., A to A-, A- to B+, etc.) per absence. Also, arriving to class late or leaving early will count as partial absences. You are responsible for any material covered in class and any assignments that are given **whether or not you are there**.

Absence from quizzes, the midterm, and the final exam will be excused only for a well-documented reason. The decision to allow a make-up will be made in accordance with the policies of Adelphi University.

If you need to be absent for any class meetings due to religious observance or any other reason, please notify the instructor within the first week of the semester.

## Course Materials

Bring the following to all class meetings:

- 1) A four-function or scientific calculator (graphing calculators are NOT allowed)
- 2) The textbook:
  - Business Statistics: A First Course, 6<sup>th</sup> edition, D. Levine, et al., ISBN 978-0-13-280726-5, Pearson, 2013.

## Moodle Learning System

- To access Moodle, log on to your eCampus account, then click on the Moodle tab.
- All grades (for assignments, quizzes, and exams) will be posted to Moodle.
- Course materials (such as PowerPoint presentations, assignments, and assignment solutions) will be posted to Moodle.
- Assignments can be submitted through Moodle or on paper at the start of class.

## Disabilities

If you have a disability that may impact your ability to carry out assigned course work or complete quizzes and exams, and are not already enrolled in the Learning Disabilities Program, it is important that you contact the staff in the Disability Support Services Office (DSS), University Center, Room 310, (516) 877-3145, [DSS@adelphi.edu](mailto:DSS@adelphi.edu). If you have a physical, medical or learning disability and require accommodations, please notify the instructor and present appropriate documentation within the first week of the semester.

## Course Expectations

Since is a three-credit course, it is expected that on average you do at least 4-8 hours of work per week for this course outside of class time.

### Reading Assignments

Lectures will not cover everything you need in order to complete the homework assignments. While the class meetings will highlight the important parts of the material, there will not be time in class to cover all of the material in each reading assignment in detail. Therefore, having access to, *and reading*, the textbook is an essential component of this course. I do not expect you to understand everything in the reading assignments. I do, however, expect you to ask me questions about anything that you do not fully understand in a reading assignment, either by email, in office hours, or during the lecture covering that material. You are expected to complete all reading assignments *before* the class session covering those sections.

### Required Homework Exercises

In addition to the reading assignments, required homework exercises will be assigned at most class meetings. Required homework exercises are due at the start of the next class meeting, unless announced otherwise, either on paper or through the Moodle Learning System (see above). **Late homework will not be accepted for credit, except in extenuating circumstances when advanced notice has been given.**

Homework is an essential part of any course in mathematics, including statistics. **You learn math by doing math.** Completing your homework is also the best way to study, as it gives you an indication of the types of problems that will be on the quizzes and examinations. Give your homework the time it deserves! *You should do additional exercises from the two textbooks, not just the required ones.*

I encourage you to ask me questions about homework exercises, by email or during office hours. However, for Required Homework Exercises, I will only give a hint on how to start or where in the textbooks to refer to. I will not solve any Required Homework Exercise for you, prior to collecting it for grading. With that said, I will be glad to guide you through the solution to any exercise that is not a required homework exercise.

In general, I cannot allot class time to the review of homework. However, I will post the answers, and in some cases sample solutions, to the Required Homework Exercises on Moodle, within one week after the homework due date. For further review of graded homework, please attend my office hours.

### **Assignments Grading**

Assignments count for 30% of the semester grade. Most of this will be for the grades on the Required Homework Exercises.

Some Required Homework Exercises will involve doing calculations to arrive at the correct answer. You need to show your work, in addition to the correct answer, to receive full credit. Also, you will have exercises that involve providing a verbal answer or explanation. The grades for those exercises will be based on the accuracy and completeness of your responses.

While this is not a writing course, you should use correct spelling and grammar when completing assignments. When answering a question, or part of a question, that does not involve doing calculations, you need to write in full sentences. If you have difficulty with spelling and grammar, you should use the spell check and grammar check features on a word processor, like Microsoft Word, to complete the verbal parts of your assignments. However, your grade will not be lowered for poor writing, spelling, or grammar if the content of what you are trying to say is clear.

### **Academic Honesty**

You are expected to be familiar with, and follow, Adelphi University's Honor Code and policies on Academic Honesty (which can be viewed on the web at <http://academics.adelphi.edu/policies/honesty.php>).

Violations of these standards, including (but not limited to) plagiarism of any portion of an assignment or misconduct during quizzes and examinations, will be dealt with in accordance with University regulations and procedures.

No credit will be given to student assignments, or portions thereof, that are substantially similar. I will not try to figure out who copied from whom; it is *your* responsibility to not let anyone copy your homework.

Adelphi University has a license agreement with Turnitin.com, a service that helps prevent plagiarism from internet resources. I reserve the right to request an electronic copy of any written assignment submitted in this course for review through Turnitin.com, as per the policies on Academic Honesty mentioned above.

### **Incomplete Policy and other university policies**

This course is subject to all requirements and regulations in the Adelphi University Graduate Bulletin, which can be found at: <http://academics.adelphi.edu/bulletin-index.php>

### **Student Course Evaluations**

Towards the end of the semester, the course evaluation will become available to you on eCampus. Your feedback is very valuable to me in making improvements to the course for future students. Please be assured that your responses are anonymous and that the results will not be available to me until after your final course grades are submitted to the University.

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STUDENT ACKNOWLEDGEMENT:

I HAVE READ AND UNDERSTOOD THE SYLLABUS FOR SUMMER 2013 DSC 670-123

Signature: \_\_\_\_\_ Printed Name: \_\_\_\_\_ Date: \_\_\_\_\_