



## **COURSE SYLLABUS: SPRING 2017**

Gerlach Hall 375, 6:15pm – 9:30pm

Monday Section (4937)

Wednesday Section (4938)

### **INSTRUCTOR**

Dr. Shannon Harris  
[harris.2572@osu.edu](mailto:harris.2572@osu.edu)  
636 Fisher Hall  
(614) 688 – 2601

**Office Hours:** Wednesday, 4pm-5pm, 636 Fisher Hall. If you need to schedule to meet with me at another time, please email me and make an appointment.

### **TEACHING ASSISTANTS**

Greg Greve: [greve.34@osu.edu](mailto:greve.34@osu.edu) & David Zimmerman: [Zimmerman.449@osu.edu](mailto:Zimmerman.449@osu.edu). Please feel free to contact Greg and David for any questions you have on class material.

### **TEXT**

Albright and Winston, Business Analytics: Data Analysis for Decision Making, 5<sup>th</sup> Edition, Cengage Learning, 2015, ISBN 978-1133629603

Link to text from the Cengage website: <http://services.cengagebrain.com/course/site.html?id=1827162>

### **COURSE OBJECTIVE**

This course develops the quantitative thinking and skills needed for managerial data analysis. Large quantities of data are becoming more widely available in all disciplines of business. The analysis of data in accounting, finance, marketing, operations, and human resources is based on the same underlying principles and techniques. This course exposes students to these fundamental principles and to examples of applications from a variety of disciplines.

Concepts covered in this class will allow students to be exposed to graphing and describing data, and probability and probability distributions. Students will also be introduced to data sampling and making inferences from data. Confidence intervals, hypothesis tests, and regression analysis will also be covered.

### **COURSE STRUCTURE**

During class, I will lecture with slides that will be available on Canvas before class begins. The slides will include the class material, and several examples that will be worked through during class. I believe your understanding of the material is enhanced if you work through the problems in class with me. To facilitate this, please do the following:

1. Bring your laptop to every class session.
2. Review assigned reading and video material before class.



3. Review the problem sets on Canvas before class
4. Come prepared to actively participate!

I understand that many students may need to miss class because of work or personal obligations. I will video tape each class, and will send a link with the recording to anyone who requests it. This should not be used as a *substitute* for coming to class, as the class examples are used to facilitate learning in the classroom.

### SOFTWARE

This is a course in statistics and statistical modeling, and many of the computations will be done using a computer package. The objective is not to teach you the computer package, but how it can be used to formulate and interpret statistical problems. The majority of computations can be done by hand, but the computer package simplifies the process.

I will use Microsoft Excel in class, along with an Excel add-in, StatTools. StatTools is included in the DecisionTools Suite from Palisade that is available with the book. The download includes a two-year license, and access to additional Statistical Analysis software such as @Risk and Precision Tree. Both Excel and StatTools are installed in the Fisher labs, and you should also have both tools downloaded onto your personal laptop before attending the first class.

Although I will use StatTools in class for all examples and all examples in the book use StatTools, you are not required to use StatTools. As alternatives, you may use SPSS, SAS, or MiniTab in class. These software packages will also be available during the exams.

### HOMEWORK

Problem sets will be posted with the course material for each class. The problem sets do *not* need to be turned in, but are helpful to further understanding the material taught in class, and preparing for the Exams. The answers to the problem sets will be posted to Canvas the Sunday before the next class.

### DATA ANALYSIS CASE

A Case involving analysis of a large data set will be provided, and the results will need to be turned in as two deliverables, as listed below in the Course Schedule. The purpose of the case is to familiarize students with the concepts in class given a real life dataset. Cases may be done solo, or in groups of up to five. Each group must be prepared to make a presentation of its results during one of the Case class sessions.

### EXAMS

There will be 2 Exams: a Midterm and a Final. The exams will require the use of Excel and/or StatTools. Computers will be provided for the exams. The exams are non-comprehensive in the sense that they focus on material discussed since the last exam. The subject matter builds on prior material, and thus requires an understanding of earlier material. A formula sheet will be provided for you during the exam.

Exams are an individual effort; no contact should be made with any other person during the exam. The exams cannot be retaken or taken at another time except under predetermined or extreme circumstances.

### GRADING

Midterm:	35%
Exam:	35%
Case Part 1:	15%
Case Part 2:	15%



**ACADEMIC MISCONDUCT**

Material submitted for course grade credit must be your own work. Please be informed that I must follow Faculty Rule 3335-5-54, which requires that “all instances of what he or she believes may be academic misconduct” be reported to the University Academic Misconduct Committee. Academic misconduct is a serious threat to the integrity and value of your diploma.

**DISABILITY ACCOMMODATION**

If you need an accommodation based on the impact of a disability, arrange an appointment with me as soon as possible. I rely on the Office for Disability Services for assistance in verifying need and developing accommodation strategies.

**COURSE SCHEDULE: SPRING 2017**

Monday Section (4937)

Wednesday Section (4938)

Week	Monday	Wednesday	Topic	Focus	Reading	Assignment
1	01/09	01/11	Exploring Data	Introduction and Describing Data	Chapter 1 & Chapter 2	
2	01/20 (F)	01/18		Relationships Among Variables	Chapter 3	
3	01/23	01/25	Probability Distributions	Probability and Distributions	Chapter 4	
4	01/30	02/01		Normal and Binomial Distributions	Chapter 5	
5	02/06	02/08	Statistical Inference	Sampling and Sampling Distributions	Chapter 7	
6	02/13	02/15		<i>Case &amp; Review for Midterm</i>		<i>Case Part I</i>
7	<b>02/20</b>	<b>02/22</b>		<b>MIDTERM</b>		
	02/27	03/01		No Class: Session 1 Exams		
8	03/06	03/08	Statistical Inference	Confidence Intervals	Chapter 8	
	03/13	03/15		SPRING BREAK!!		
9	03/20	03/22	Statistical Inference	Hypothesis Testing	Chapter 9	
10	03/27	03/29	Regression Modeling and Analysis	Regression Modeling	Chapter 10	
11	04/03	04/05		Regression Modeling	Chapter 10	
12	04/10	04/12		Regression Analysis	Chapter 11	
13	04/17	04/19		<i>Case &amp; Review for Final</i>		<i>Case Part II</i>
14	<b>04/24 (5/1)</b>	<b>04/26</b>		<b>FINAL</b>		