

BI 348
Business Analytics: Data Analysis and Decision Making using Excel

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We have Two Class web sites:

1. Use the people.highline web site to download files and watch videos:
<https://people.highline.edu/mgirvin/AllClasses/348/348/BI348.htm>

The people site contains:

- 1) Introductory Video
- 2) Syllabus & Schedule
- 3) Video lectures
- 4) Downloadable files for class
- 5) The people site with the videos and files is available at all times, even after the class ends.

2. For uploading Tests, for posting questions in the Discussions area and to see current grade use the Canvas site

<https://canvas.highline.edu>

The Canvas site contains:

- 1) Announcements
- 2) Discussions area for asking questions
- 3) Homework Upload Links
- 4) Grades section shows you your scores for homework
- 5) The Canvas site is only available during fall quarter which starts at 12:00 AM, April 2, 2018 and ends at noon Wednesday, June 13, 2018. This means that the Canvas web site will not be available after the end of the class: noon Wednesday, June 13, 2018.

Objective of class

Using Microsoft Excel and statistical analytic methods, learn how to build efficient Excel models to solve business problems and to convert real world large data sets into useful information for decision making.

Description of class

This class will take a hands on approach to learning business analytics using the latest version of Microsoft Excel to make meaning of the torrent of data that business people our given each day. We will learn that basics of descriptive, predictive and prescriptive statistical methods and learn how to build efficient Excel models to solve business problems and to convert large data sets of unorganized raw data into useful information for decision making.

Outcomes

Business Analytics:

1. Intro to Business Analytics: data analysis and decision making.
2. How to build efficient and effective spreadsheet models.
3. Import and clean data in Excel.
4. Building Data Models in Excel with Power Pivot
5. Descriptive Statistics: Numerical Measures: Mean, Median, Mode, Standard Deviation, Correlation and more.
6. Descriptive Statistics: Data Visualization: Charts, Tables and Dashboards.
7. Predicative Statistics: Simple Linear Regression.
8. Predicative Statistics: Multiple Linear Regression.
9. Predicative Statistics: Time Series Analysis and Forecasting.
10. Prescriptive Statistics: Linear Programming Models.
11. Prescriptive Statistics: Simulation

Excel:

1. How to build efficient and effective spreadsheet models.
2. Be able to create basic, intermediate and advanced formulas for data analysis.
3. Utilize basic, intermediate and advanced Excel data analysis features for data analysis.
4. Be able to visualize data using Conditional Formatting.
5. Create basic, intermediate and advanced charts to visualize quantitative data.
6. Create basic, intermediate and advanced PivotTables.

Requirements for class:

- 1) Must have daily access to a PC computer that fulfills these requirements:
 1. Computer must be a PC computer.
 2. Computer can NOT BE A MAC.
 3. Computer must have an internet connection that allows you to watch videos from YouTube and download Excel files.
 4. Computer must have Excel 2013 for PC or Excel 2016 for PC.
- 2) Must buy this textbook:
Essentials of Business Analytics, 1st edition (do not buy 2nd edition)
Authors: Camm, Cochran, Fry, Ohlmann, Anderson, Sweeney, Williams
ISBN #: 978-1-285-18727-3

Highline Building 30 Computer Labs:

- 1) If you do not have daily access to a PC computer with Excel 2016, Highline provides computers for you to use in building 30.

Structure of class

- 1) Start by reading the schedule. The schedule list everything you need to do for each week.
- 2) For each week you should do things in this order:
 1. Download files and watch videos.
 2. As you watch the videos, you follow along and practice what you see in the videos.
 3. Read Textbook.
 4. Do homework problems from the textbook in an Excel Workbook, which you can upload in Canvas for points toward a grade.
 5. There are no tests or quizzes in this class. All of your points toward a grade come from the homework you upload into canvas.

Schedule

Week	Dates	Videos	Topics	Pages to read in textbook	Suggested HW Problems - not handed in for points	HW # to hand in for points toward a grade	Points for Homework	Homework Due Date (before midnight)
Week 1	Mon, Apr 2, 2018 to Sun, Apr 8, 2018	#1	Chapter 1: Intro to Business Analytics	# 1-14	None			
Week 2	Mon, Apr 9, 2018 to Sun, Apr 15, 2018	#2-11	Chapter 7: Spreadsheet Models	# 320-344	#1,2,3,12	#4,5,18,19	50	Sun, Apr 15, 2018
Week 3	Mon, Apr 16, 2018 to Sun, Apr 22, 2018	#12-25	Chapter 2: Descriptive Statistics	# 15-50	#3,12,18,20	5,8 (Column chart, not Histogram),17, Case and Managerial Report #1, 2, 3	40	Sun, Apr 22, 2018
Week 4	Mon, Apr 23, 2018 to Sun, Apr 29, 2018	#43	Chapter 3: Data Visualization	Pages 70-84 and 87-102	#1, 7	#2, 5, 11	20	Sun, Apr 29, 2018
Week 5	Mon, Apr 30, 2018 to Sun, May 6, 2018	#44-45	Chapter 2 & 3 Two Variable Measure & Chart	Chapter 2, #51-56 Chapter 3, #85-87		Chapter 3, pages118-119, Case Problem: "All-Time Movie Data"	25	Sun, May 6, 2018
Week 6	Mon, May 7, 2018 to Sun, May 13, 2018	#46-49	Chapter 2 & 4: Simple Linear Regression	Chapter 4, #123-137		Download this week's Homework File from our web site. Read the instructions in the downloaded file, then do these problems: #2, 3, 4, 6.	40	Sun, May 13, 2018
Week 7	Mon, May 14, 2018 to Sun, May 20, 2018	#50-52	Chapter 4: Multiple Regression & Inferences	Chapter 4, Page 137-165	#8	#10	30	Sun, May 20, 2018
Week 8	Mon, May 21, 2018 to Sun, May 27, 2018	#53-56	Chapter 5: Time Series and Forecasting	Chapter 5, Pages 202-238	#10, #19, #27 a & b only	#13, #24	30	Sun, May 27, 2018
Week 9	Mon, May 28, 2018 to Sun, Jun 3, 2018	#57-63	Chapter 8 & 9: Linear Optimization Models	Pages 352-390, Page 405-415	#2 in chapter 08	#1 and 16 in chapter 08 #1 in Chapter 09	30	Sun, Jun 3, 2018
Week 10	Mon, Jun 4, 2018 to Sun, Jun 10, 2018	#64-68	Chapter 11: Simulation using Excel	Pages 485-498. Pages 545-549	3,5,8	#1, #4	50	Wed, Jun 13, 2018

List of Homework Problems to do from textbook

Chapter in textbook	Page in Textbook	Homework Problem	Points	Due Date
Chapter 07	Page 345	#4	20	Sun, Apr 15
Chapter 07	Page 345	#5	20	Sun, Apr 15
Chapter 07	Page 349	#18	5	Sun, Apr 15
Chapter 07	Page 349	#19	5	Sun, Apr 15
Chapter 02	Page 60	#5	5	Sun, Apr 22
Chapter 02	Page 61	#8 (Column chart, not Histogram)	5	Sun, Apr 22
Chapter 02	Page 63	#17	5	Sun, Apr 22
Chapter 02	Page 66	Case and Managerial Problem #1, 2, 3	25	Sun, Apr 22
Chapter 03	Page 110	#2	5	Sun, Apr 29
Chapter 03	Page 111	#5	5	Sun, Apr 29
Chapter 03	Page 113	#11	10	Sun, Apr 29
Chapter 03	Pages 118-119	Chapter 3, pages118-119, Case Problem: "All-Time Movie Data"	25	Sun, May 6
Chapter 04	Page 183	#2, Download this week's Homework File from our web site. Read the instructions in the downloaded file	10	Sun, May 13
Chapter 04	Page 183	#3, Download this week's Homework File from our web site. Read the instructions in the downloaded file	10	Sun, May 13
Chapter 04	Page 184	#4, Download this week's Homework File from our web site. Read the instructions in the downloaded file	10	Sun, May 13
Chapter 04	Page 185	#6, Download this week's Homework File from our web site. Read the instructions in the downloaded file	10	Sun, May 13
Chapter 04	Page 187	#10	30	Sun, May 20
Chapter 05	Page 240	#13	10	Sun, May 27
Chapter 05	Page 243	#24	20	Sun, May 27
Chapter 08	Page 390	#1	10	Sun, Jun 3
Chapter 08	Page 397	#16	10	Sun, Jun 3
Chapter 09	Page 431	#1	10	Sun, Jun 3
Chapter 11	Page 527	#1	25	Wed, Jun 13
Chapter 11	Page 528	#4	25	Wed, Jun 13
Total Points Possible for the class:			315	

Homework Earns You Points Toward Your Grade

- 1) You do homework problems from the textbook to earn points toward a grade. There are no tests or quizzes in this class so all of your points come from doing homework.
- 2) In order to earn credit, you must follow these rules:
 1. For each week you must complete the problems in an Excel workbook using efficient Excel methods. The "efficient methods" are learn by watching and studying the videos.
 2. Your Excel Workbook for homework MUST have a proper file name. The file name must include your first and last name and it must include the week number. An example of a correctly named file for Sioux Radcoolinator in Week 5 would be:
 - i. **"SiouxRadcoolinatorHomeworkForWeek5.xlsx"**
 3. A new sheet must be used for each homework problem, and the sheet must have a proper name. An example of a proper name for homework problem #14 would be: "HW14".
 4. You must upload the Excel Homework file in the Home area of Canvas before midnight on the due date listed in the schedule.
 5. Late homework loses 25% of the earned points.
 6. You must do all your own work and not work with others and not copy other's work. See section on Cheating for full details.

Canvas Gradebook is NOT Correct

- 1) Do NOT use the percentage grades you see in canvas to calculate your grade.
- 2) The percentage grades you see in canvas indicate the percentage correct, ONLY on assignments handed in.
- 3) The scores for each assignment in Canvas are correct. That is to say, the point you earned are correct.
- 4) All official grading for your grade will be done outside of Canvas. Grades will be calculated in Excel by the instructor.

Cheating:

- 1) Cheating will result in the student receiving a failing grade for the assignment.
- 2) Turning in an item you did not create is cheating.
- 3) Copying another person's digital item or work is cheating.
- 4) Allowing (intended or not intended) someone else to copy your work or digital item, is considered cheating and will result in a failing grade for the assignment. This means that you must safeguard your work and computer so that others do not have access to your work or computer.
- 5) You must do your own work, do not look at other's work, and do not talk with others (to do so is cheating).
- 6) Having someone complete or help you with a homework assignment is cheating.

Grading:

- 1) Your grade is calculated by tallying your total points from homework and dividing by the total points possible from homework. That decimal or percentage can be looked up in the table below to determine your grade.
- 2) For example, if you got 20 out of 30 on a homework and 24 out of 30 on a different homework and 44 out of 50 on a different homework, your total points would equal 88 (20+24+44), the total possible would be 110 (30+30+50), and your percentage of points earned would be: $88/110 = 0.80$ or if you format it with a percentage: 80% and your decimal from the table below would be 2.6.

3) Grading Scale:

% Grade	Decimal Grade
94.00%	4
93.00%	3.9
92.00%	3.8
91.00%	3.7
90.00%	3.6
89.00%	3.5
88.00%	3.4
87.00%	3.3
86.00%	3.2
85.00%	3.1
84.00%	3
83.00%	2.9
82.00%	2.8
81.00%	2.7
80.00%	2.6
79.00%	2.5
78.00%	2.4

% Grade	Decimal Grade
77.00%	2.3
76.00%	2.2
75.00%	2.1
74.00%	2
73.00%	1.9
72.00%	1.8
71.00%	1.7
70.00%	1.6
69.00%	1.5
68.00%	1.4
67.00%	1.3
66.00%	1.2
65.00%	1.1
64.00%	1
63.00%	0.9
62.00%	0.8
61.00%	0.7
0.00%	0

Announcements & Discussions In Canvas

The teacher will communicate with you through Announcements in Canvas and by answering your questions in the Discussions area of Canvas.

When you post a question in Canvas:

- 1) Spell and grammar check your post.
- 2) Do not post questions about tests or quizzes in the Discussion area. The proper place to send questions about tests or quizzes is to send the teacher an e-mail.

E-mailing Rules:

1. Family Educational Rights and Privacy Act (FERPA) requires that all personal information be communicated by the educational e-mail assigned to you by the academic institution. For this reason, you **MUST** use your assigned "@students.highline.edu" e-mail when communicating with me by e-mail. Note: e-mails sent within Canvas are legal in regards to the FERPA Law.
2. You cannot e-mail the instructor except when you have a personal matter to discuss or you have a question about a graded homework problem. All other questions about BI 348 are done in the Discussions area of Canvas.
3. All e-mails with questions about graded homework problems or personal matters must:
 - a. **MUST** use your assigned "@students.highline.edu" or Canvas e-mail
 - b. Include a subject line that includes the text "BI 348"
 - c. Must be spell and grammar checked
 - d. Must be signed with the student's name

Instructor Contact Information:

Spring 2018					
Michael Girvin					
Email: mgirvin@highline.edu					
Class Web Site: https://people.highline.edu/mgirvin/					
Class Schedule					
Item	Course No.	Days	Time	Location	End Of Class
2032	Busn 135	Online	Online	Online	Mon, Jun 11, 2018, noon
2066	Busn 216	Online	Online	Online	Tue, Jun 12, 2018, noon
2058	Busn 210	Online	Online	Online	Tue, Jun 12, 2018, noon
2010	BI 348	W	5:30 - 7:30 PM	29-308	Wed, Jun 13, 2018, noon
	Office Hours	W	3:30 - 5:30 PM	29-307	
	Office Hours	M-F	by appointmnet - send e-mail to arrange	29-307	

Access Services

Highline Community College offers support services for students with disabilities to ensure access to programs and facilities. If you have questions or comments about Access Services, please contact us at 206-878-3710x 3857 or access@highline.edu. Access Services is located in Building 99 Rooms 150-185

Incomplete Policy

- 1) In accordance with Highline policy, Incomplete Contacts are granted in the cases of documented emergencies. Examples of documentable emergencies are notes from doctor for hospital visit or a copy of death certificates for a relative.
- 2) Incompletes are considered only if 80% of the class work is done with a 2.0 grade or higher before the end of the ninth week.
- 3) The student must notify the instructor BEFORE the last day of the class in order to qualify for an incomplete.
- 4) If an incomplete is granted, a contract between the student and teacher will be created and the terms of the contact must be completed within four weeks of the last day of class.

Last Day of Class:

- All graded homework problems must be completed before the final day of class: **noon Wednesday, June 13, 2018** BEFORE noon.
- The Canvas web site will be shut off after the final day of class: **noon Wednesday, June 13, 2018.**
- If you want to contact the instructor after the class is over, you can e-mail Michael Girvin at: mgirvin@highline.edu

Important Dates:

Spring 2018	
Apr 2	Classes begin
Apr 20	Last day to withdraw, no W on transcript
May 25	Last day to withdraw officially
May 28	Memorial Day Holiday
Jun 8	Last day of classroom instruction
Jun 11-14	Final exams
Jun 14	Commencement
Jun 15	Faculty workshop