

MGNT 333: Spring 2015
Business Analytics for Decision Making
MW 2:00 pm – 3:15 pm (#156)
MW 3:30 pm – 4:45 pm (#156)

Instructor:

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Office Hours:

12:00pm – 2:00pm M.
12:00pm – 2:00pm W.
After 6:15pm M.

Course Description:

Recent articles in the Wall Street Journal, USA Today, and other media reports, quantitative or math and statistical skills have become the most highly desired skills for many employers. This course is designed to provide an introduction into analytical methods used to support organizational decision making. We will discuss aspects of decision modeling and cover topics including multiple regression, linear programming, descriptive statistics, and time series analysis. This course builds on the skills developed in STAT 200 and focuses on their application for improving managerial decision making.

Course Objectives:

This course is an opportunity for you to gain:

- An understanding of how quantitative methods can facilitate decision making
- An understanding of how to create and use quantitative models
- Skills for recognizing reasonable results from quantitative models
- Skills for interpreting and reporting results for various audiences
- Confidence in working with numbers
- Experience using MS Excel for statistical and quantitative analysis

Prerequisites:

Junior standing and completion of ENGL 102 and ITEC 100 or INSY 181, and MATH 121 or MATH 151, and STAT 200.

Course Text:

Business Analytics: Methods, Models, and Decisions. By James Evans. Pearson; edition 1.
ISBN 13: 978-0132950619

Software and Hardware:

Microsoft Excel **2010 (or greater)** with the Analysis ToolPak installed.
POM-QM for Windows v4 (<http://www.pearsonhighered.com/taylor/>)

You **must** have access to a computer that meets the recommended configuration for students entering the College of Business and Economics. This means you need a **Windows capable** laptop.

Analysis ToolPak for Microsoft Excel and POM-QM for Windows v4 are *only* available for the *Windows OS*. If you use Apple or Linux operating systems, you will need to dual boot or run a Windows virtual machine. The Apple platform provides Boot Camp free. A possible Apple virtual machine solution is Parallels. Both of these solutions require you to purchase a legal copy of Windows 7 or 8.1 and MS Office 2013 and complete the installation. It is my experience and observation that the Parallels virtual machines solution is the least complex for students. **HOWEVER, DUAL BOOTING PERFORMS THE BEST.**

IT IS EXTREMELY IMPORTANT THAT YOU PREPARE YOUR LAPTOP FOR IMMEDIATE USE! The configuration and installation process is rather extensive and time consuming. The Radford IT Support staff in Heath Hall can assist you.

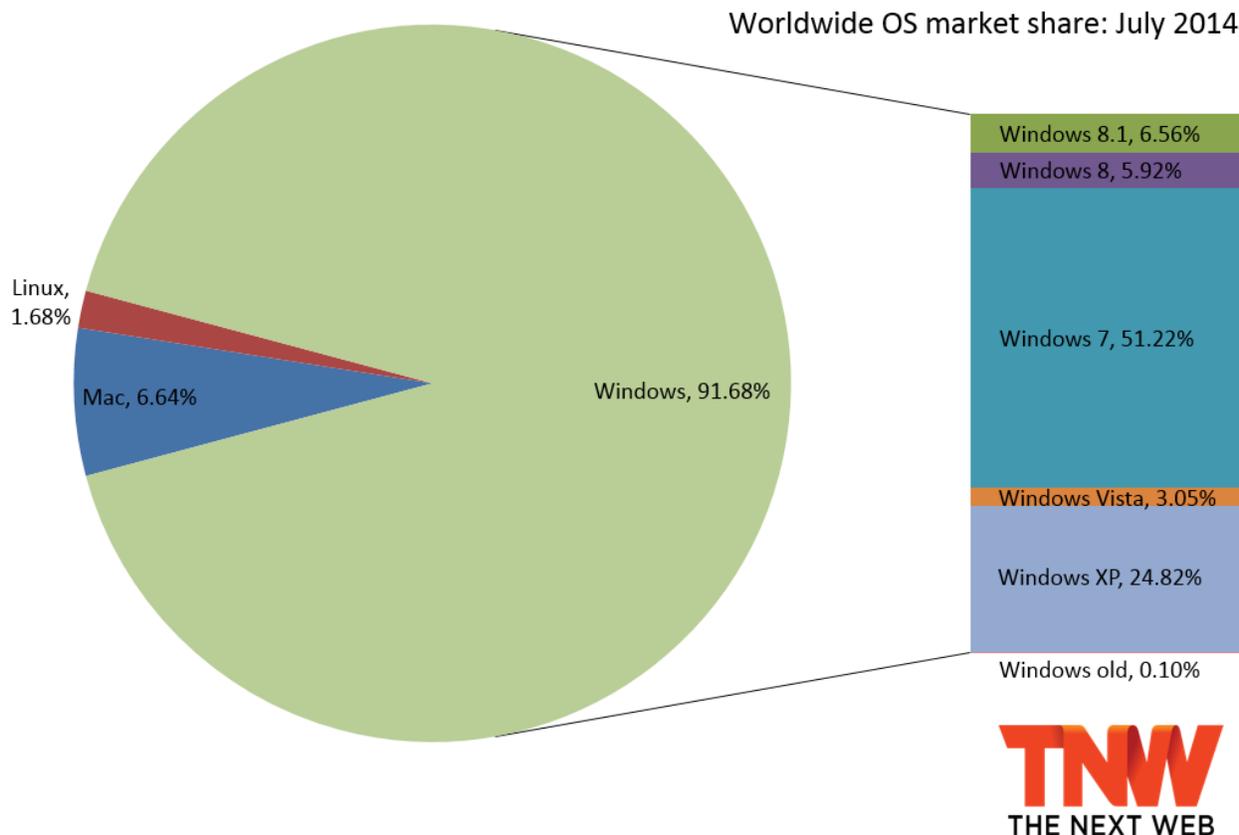
Background on Compatibility Issues:**A TheNextWeb Report**

“Despite support for Windows XP finally ending three months ago, the ancient OS has only now fallen below the 25 percent market share mark. To add to the bad news for Microsoft, after only nine full months of availability, its latest operating system version, Windows 8.1, has lost share for the first time.

The latest market share data from [Net Applications](#) shows that Windows 8 and Windows 8.1 lost a combined 0.06 percentage points (from 12.54 percent to 12.48 percent) between June and July. More specifically, Windows 8 slipped 0.01 percentage points (from 5.93 percent to 5.92 percent), while Windows 8.1 dipped 0.05 percentage points (from 6.61 percent to 6.56 percent). There is no surprise that Windows 8, which saw its biggest gain in August at 2.01 percentage points and its biggest loss in November at 0.87 percentage points, continues to slip. The fact that

Windows 8.1 has managed to lose share, however, may raise eyebrows. While it is possible the dip is just a blip, it does not bode well for Microsoft, especially given that the upgrade path from Windows 8 to Windows 8.1 is merely a free download away.

Meanwhile in July, Windows 7 managed to grab an additional 0.67 percentage points (from 50.55 percent to 51.22 percent). Windows 8 and Windows 8.1 usually do better combined than Windows 7 does, but some months the opposite happens, and the last three months haven't been good ones for the new releases. Microsoft will likely one day struggle to woo users off Windows 7, just like it is currently trying to do with the headache that is Windows XP.



Speaking of earlier versions, Windows Vista managed to gain 0.10 percentage points (from 2.95 percent to 3.05 percent). Windows XP dropped 0.49 percentage points (from 25.31 percent to 24.82 percent). While it's great to finally see it fall under the 25 percent mark, the drop is nowhere near as large as it should be.

In 2013, Windows lost share every month except for March, July, and November. So far in 2014, Windows has only slipped in January and April; it gained another 0.15 percentage points (from 91.53 percent to 91.68 percent) in July. OS X fell 0.09 percentage points (to 6.64 percent), while Linux slipped 0.06 percentage points (to 1.68 percent).

Net Applications uses data captured from 160 million unique visitors each month by monitoring some 40,000 websites for its clients. [StatCounter](#) is another popular service for watching market share moves; the company looks at 15 billion page views. To us, it makes more sense to keep track of users than of page views, but if you prefer the latter, the corresponding data is available [here](#) (mobile and desktop operating systems are combined).”

Course Website:

The course will have a Desire2Learn site and will contain class lectures, notes, demo problems, homework assignments and additional supplemental materials. It is important that you check the site regularly for updates.

Course Grading Composition:

Homework	50% (500 points total)
Midterm I	15% (150 points total)
Midterm II	15% (150 points total)
Final Exam	20% (200 points total)

Final Grade Scale (rounded to two decimal places)

A	93-100	C	73-76
A-	90-92	C-	70-72
B+	87-89	D+	65-69
B	83-86	D	60-64
B-	80-82	D-	55-59
C+	77-79	F	< 55

Please note a D grade is less than satisfactory and may not meet particular program or course requirements.

Class Attendance:

Class attendance is essential to perform well in this course. **This is a difficult course.** You are responsible for all material and announcements we discuss during class. If you miss class, it is your responsibility to obtain notes on the material, class announcements, and discussions that you miss.

Exams:

- Midterm I, Midterm II and the Final Exam, may contain multiple choice, short answer and computation questions, some or all requiring the **use of your laptop**, MS Excel and QM for Windows software based on material from class and the text. **It is imperative that you understand that when the exam time is over, the D2L drop box closes and will not reopen. Late exams cannot be accepted as it is not fair to students who submitted by**

the due time. It is very important to upload files along the way during the exam. It is extremely important that once you have uploaded your files, that you not open, copy, change, move, or email your exam files. This is because, at times some uploaded files may be corrupted by D2L. To receive credit, I must be able to determine that the file is in its original state.

- If you are unable to take an exam at the scheduled time, arrangements must be made **prior** to the exam. Excused absences will be handled in the following maner:
 - The weight corresponding to the exam will be added to the Final exam. Your reweighted final exam **will be a cumulative exam**. Excused absences are typically handled by reweighting. The decision as to other alternatives will be implemented at the discretion of the instructor.

Homework Assignments:

Homework assignments are designed to help you learn and practice the fundamental mechanics of the methods and concepts discussed in class. Working together with others by discussing the homework problems and general solution approaches is encouraged; however, direct copying another student's solution or electronic files is a violation of the RU Academic Honesty Policy. Homework solutions, MS Excel or QM for Windows files are required to be individually created.

There will be 5 major homework assignments during the semester. These assignments are due at the beginning of class on the date and time assigned or by the assigned date and time if submitted to Desire2Learn. If time permits, additional optional homework assignments may be available. Late assignments will not be accepted as it is not fair to students who submitted by the due date. **Once the D2L drop box closes at the stated due date, it stays closed.**

Class Behavior:

Students are expected to respect the right of other students to receive an education, and therefore, should avoid any activity that would distract the class. All students are expected to treat others with respect. I am a very laid back instructor, but I am very serious about the RU learning community guidelines. **PLEASE TURN OFF YOUR CELL PHONE AND REMOVE IT FROM SIGHT. If I observe a student using their phone, I will ask the student to leave the classroom and not attend for one week.**

E-mail:

- When sending email correspondence to me, **PLEASE** use the following conventions. **If these guidelines are not followed, I may not receive your email.**

- To ensure that your email is appropriately filtered, you **MUST place "MGNT 333" in the subject line. I will be able to answer emails up to 9:00pm.**
- All emails must include a greeting (example: "Hello Mr. King"), a body (the topic of your email), and a signature (example: "Bob Jones, MGNT 333 2:00pm section").
- Email is not 100%; please speak to me in person, if at all possible, for very important issues.
- **Please verify that your D2L account preferences forwards email to YOUR Radford email address.**

Accommodations:

If you are seeking academic accommodations under the Americans with Disabilities Act at Radford University, you are required to register with the Disability Resource Office (DRO). To receive academic accommodations for this class, please submit your documentation to the DRO in the lower level of Tyler Hall Suites 54-69, by fax to 540-831-6525, by email to dro@radford.edu. After submitting documentation to our office, you will set up an interview with a Disability Services Specialist to discuss accommodations. You will be notified via email once your accommodation package is complete and ready to be picked up. Once you have picked up your accommodation package, you will need to meet with each course professor during their office hours to review and discuss your package. For more information and/or for documentation guidelines, visit www.radford.edu/dro or call 540-831-6350.

	Topics (<i>Subject to change</i>)	Readings	HW Due on Wednesdays
Week 1 Jan 21	Introduction to Business Analytics	Ch. 1	
Week 2 Jan 26	Analytics on Spreadsheets	Ch. 2	
Week 3 Feb 2	Visualizing and Exploring Data	Ch. 3	
Week 4 Feb 9	Descriptive Statistical Measures	Ch. 4	
			Ch. 1,2,3
Week 5 Feb 16	Descriptive Statistical Measures	Ch. 4	
	Midterm I (Wednesday, Ch. 1,2,3)		
Week 6 Feb 23	Probability Distributions and Data Modeling	Ch. 5	
	No class Wednesday February 25		
Week 7 Mar 2	Probability Distributions and Data Modeling	Ch. 5	
			Ch. 4,5
Week 8 Mar 9	Spring Break		
Week 9 Mar 16	Regression Analysis	Ch. 9	
Week 10 Mar 23	Continued...	Ch. 9	
Week 11 Mar 30	Continued...	Ch. 9	
			Ch.9
Week 12 Apr 6	Linear Optimization	Ch. 11	
	Midterm II (Wednesday, Ch. 4,5,9)		

Week 13 Apr 13	Linear Optimization	Ch. 11	
Week 14 Apr 20	Linear Optimization	Ch. 11	
			Ch. 11
Week 15 Apr 27	Integer Optimization	Ch. 14	
	Final Exam Review Ch. 11,14		Ch. 14
May 4	Final Exam 2:45 pm		
	Final Exam ???		