Fall 2015

QMBE 4400

W. Michael Easley
University of New Orleans

QMBE 4400-601 FAll 15
Course Syllabus

Instructor: W. Michael Easley, M.S.
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MyScheduleSpring15: (some other times possible by appointment and usually after class)
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Mon	Tues	Wed	Thurs
1-1:45 PM Office	1-1:45 PM Office	1-1:45 PM Office	1-1:45 PM Office
2-2:50 QMBE 2786-001	2-3:15 PM QMBE 2786-001	2-2:50 QMBE 2786-003	2-3:15 PM QMBE 2786-001
3-4 PM Office		3-4 PM Office	
	4:30-5:30 PM Office		5-5:50 PM QMBE 2787-602
	6-8:45 PM QMBE 4400-601		6-8:45 PM QMBE 2786-601

General:

•This course is an introduction to statistical techniques for the MBA candidate. We are charged with covering in 14 classes most of what COBA undergraduates cover in 2 semesters. So fasten your seat belts! The average student with no previous knowledge of statistics will need to study at least 6 hours per week outside of class, perhaps considerably more. As you certainly know, the playing field is never level. Good mathematical skills are an advantage, as is prior exposure to statistics. We will obviously have to touch some topics, such as probability theory and combinatorics (the laws of counting) very lightly in order to be able to do what is probably more important for you, the interpretation of statistical output. But since the maxim "garbage in, garbage out" is so true, I have to insist on your having a good grasp of the logical principles that govern this subject. The big picture in statistics is essentially "What can we say -- and with what degree of mathematical certainty -- about a very large set of numbers, based on a much smaller sample?" We will use the computer in the lecture room in order to see how statistical software, in our case Excel, can be used to find the answers to the questions we pose. I will post data sets on Moodle and ask you to analyze from various perspectives. For reference, I will post the Excel lab manual that I compiled for QMBE 2787. To be sure that you understand the mathematics, I'll also ask you to do many of the calculations by hand, but only for very small data sets. There may also be essay/explanation questions on the tests. Good English language skills are required.

Required tools and materials:

1. The **Text:** Jaggia and Kelly, *Business Statistics: Communicating with Numbers*, 1st edition**.** Since you will be doing your homework online, you will have to have access to the McGraw-Hill course management system **Connect**.

I think this is your best option: Buy the package in the bookstore for QMBE 2786. It is the text above but customized for UNO as *Elementary and Intermediate Statistics for Business and Economics*. The package includes a loose-leaf hard text and the Connect access that you need for the homework and costs $136. This is almost the same price as Connect Plus alone when purchased directly from McGraw-Hill. *Do not buy* the access code alone from the bookstore ($180). Get the package! Then go to the link below to register. Alternatively, you could just buy Connect Plus for this text directly from McGraw-Hill. Go to the link below. An e-book is included in the access. You can also sign up for a 2 week "courtesy access" to this course. Just go to the link and follow the directions. This may be a good option if you have second thoughts above taking QMBE 4400 or just want to postpone the purchase of access. If you have questions, e-mail me.

Registration

• To register in Connect, please visit **https://connect.mheducation.com/class/m-easley-601-tuesday** and click "***Register Now***."
•Put in your **school email address only** and hit submit.

Support & Tips

• If you have any issues while registering or using Connect, please contact McGraw-Hill's CARE team through **http://www.mhhe.com/support**. Or call 800-331-5094. To avoid problems related to unexpected technical issues, you are advised not to wait until the last moment to complete assignments. Please review your ***"Student Quick Tips"*** for further support.

Each student has to have the access above! Your required Homework will be done online.

2. A **Calculator** (bring to all classes). A calculator with statistical tools (at the least, functions for sample mean and standard deviation) is required. Fancier calculators, such as the TI-83 (highly recommended) are permitted. I'll try to write tests so that not having a TI-83 will not be an overwhelming disadvantage, but I'd be lying to say that having such a calculator is no advantage. Sharing of calculators on tests is not permitted. During the tests, Excel can be used as a calculator only.

3. **Access to Moodle** (which of course you have). All of the course materials will be posted. This also gives me an easy way to keep you posted on what to download for class or any necessary changes. (Please don't respond to blanket e-mail)

4. **A computer** with Office 2010 or 2013 will be handy. **You will probably not be able to use your Mac for Excel statistics!** Of course, you can also use the machines in **KH**.

Attendance Requirements: Please make every effort to attend all classes. Missing a class means missing a whole week of the course. There are only 15 classes total! Also, please try not to be tardy.
Tardiness has proven to be a big problem with this course. Late arrival always disrupts class to some degree. It goes without saying (but I'll say it anyway) that you should not leave class before the end of the lecture.

Tests:

•There will be 3 in-class test of about ***60 minutes*** each. The tests will be in mixed format, possibly including essays. Emphasis will be on giving logically correct analysis of statistical problems. The ***tentative*** test dates are:

Test 1	Tuesday	9/22 (lecture follows test)
Test 2	Tuesday	10/27 (lecture follows test)
Test 3	Tuesday	12/1 (course evaluation and final details discussed before test)

Changes in these dates will be announced in advance. You are responsible for keeping up to date on any aspect of the course schedule. Check Moodle often.
•The 2-hour mandatory cumulative final exam (in-class), also in mixed format, will be on

Tuesday 12/8 7:30-9:30 pm in the usual room.

•Make-up Tests: There will be no make-up tests for any reason. A missed test counts as a '0'. However, each student may replace the lowest of her/his test grade with the final exam grade. The purpose of this policy is not to improve your grade, but to handle those situations in which a student must miss a test. *Please do not ask for a make-up test*.

Homework: There will be many (about 9 - 10) homework assignments, which you will access in Connect. Many of the problems will be in algorithmic format, which means that each student has the same problem, but with different data/parameters. I will post instructions for completing these assignments – time due, number of attempts allowed, etc. Connect offer various feedback. Since the correct answers become available

after the HW is due, ***no time extensions are possible***. Never wait until the last minute to do your HW -- you could have computer/internet problems. Your lowest HW grade will be dropped.

Quizzes: I would like to have many very short (5 min./5 pts.) quizzes, to be given in the first 5 minutes of class.

Excel Projects: A number (2 or 3) of projects using Excel's statistical tools will be assigned. I will give precise instructions for their completion and the due dates.

Grading:

•Numerical grade = .20(Exam) + .45(AV. of 3 Tests) +. 20(HW AV.) + .05(Quiz AV.) + .10(Excel AV.)

•Your letter grade follows the scale 100-90=A, 89-78=B, 77-64=C, 63-50=D. There is no other curve.

More on the Course: We will very selectively go through chapters 1 -- 15 of the text. Among the important ideas addressed: Descriptive statistics, the essentials of probability theory, random variables and probability distributions, confidence intervals and hypothesis testing, analysis of variance, and regression analysis. ***I will post documents on these topics,*** which you should **download and read in advance** of each week's lecture.

Tentative Course Schedule:

Topics (documents posted on Moodle for each topic)	Reading
8/25,9/1 **Topic 1: Descriptive Statistics**	Chs. 1,2,3 omit 3.7-8
9/8 **Topic 2: Probability**	Ch. 4
9/15-22 **Topic 3: Discrete and Continuous Random Variables**	Chs. 5,6
9/22 **Test 1**	
9/29 **Topic 4: Sampling Distributions. Central Limit Theorem.**	7.1 – 7.3
10/6 **Topic 5: Estimation and Confidence Intervals**	Ch. 8
10/13-20 **Topic 6: Significance and Hypothesis Testing**	Ch. 9
10/27 **Test 2**	
10/27,11/3 **Topic 7: Hypothesis Testing with Excel**	Ch. 10 (and beyond – specific tests)
11/3-10-17-24 **Topic 8: Correlation and Regression Analysis**	Ch. 14, 15.1,15.4, 17.1
12/1 **Test 3** Course evaluation, discussion of Exam, etc.	

Miscellaneous: I am required by the University to include the following on the syllabus.

●**Some Learning Objectives.** Upon completion of this course the student should be able to:
Compute sample statistics. Use Excel to do the same. Construct frequency and relative frequency histograms. Use Excel to do the same. Calculate the probabilities of specific events. Identify discrete and continuous random variables. Compute the mean and variance of a discrete random variable. Explain the Central Limit Theorem. Compute confidence intervals for the usual population parameters. Compute the z, t, F, and χ^2 test statistics. Use the corresponding distribution tables. Find and interpret the p-value of a test. Determine whether the results of a test are statistically significant. Identify Type I and II errors. Conduct and interpret the results of the tests that are built into Excel's Data Analysis Tools. Compute covariance and coefficient of correlation. Compute the coefficients in simple linear regression. Interpret the values of the regression coefficients. Use Excel to construct multiple regression models. Interpret the multiple regression coefficients. Analyze the multiple regression output for global and individual predictor significance. Address issues of collinearity and other regression diagnostics. Use the regression model to predict values of the dependent

variable. Interpret the Excel output for these standard statistical procedures. Apply all of the above to questions involving finance and economics.

● **Academic integrity** is fundamental to the process of learning and evaluating academic performance. Academic dishonesty will not be tolerated. Academic dishonesty includes, but is not limited to, the following: cheating, plagiarism, tampering with academic records and examinations, falsifying identity, and being an accessory to acts of academic dishonesty. Refer to the UNO Judicial Code for further information. The Code is available online at http://www.studentaffairs.uno.edu.

● It is University policy to provide, on a flexible and individualized basis, **reasonable accommodation** to students who have disabilities that may affect their ability to participate in course activities or to meet course requirements. Students with disabilities should contact the Office of Disability Services as well as their instructors to discuss their individual needs for accommodations. For more information, please go to http://www.ods.uno.edu.

Please Do Not Bring Food or Drink into the Lab