



THE UNIVERSITY of NORTH CAROLINA
GREENSBORO
Inspire. Change.

MBA 701
QUANTITATIVE ANALYSIS
FOR DECISION MAKING

FALL 2016: Bryan 205 Wed. 2:00 – 4:45 PM. 8/22/16 to 12/12/16

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Office hours:

Schedule Appointment

Walk-Ins:

*Email 3 preferred slots

Tue. 10:30 AM – 11:30 AM

Mon. – Fri.

Wed. 12:00 – 1:00 PM

Thu. 10:30 AM – 11:30 AM

STUDENT LEARNING OBJECTIVES (SLOs)

This course develops quantitative methods and spreadsheet skills to support management practice and decision making including: hypothesis testing, confidence intervals, regression analysis, decision analysis, optimization and simulation modeling. The course goals are: 1) Demonstrate the wide range of situations in which quantitative analysis improves decision making and creates competitive advantages; 2) Develop students' analytical thinking skills. 3) Develop mastery of analysis using spreadsheet models, and effective communication of results.

Upon completing the course, the student should be able to:

1. *Describe* a set of data using histograms, scatter diagrams and summary statistics.
2. *Compute* statistics from sample data to support confidence interval estimation, hypothesis testing and regression analysis.
3. *Infer* the statistical precision of insights derived from confidence interval estimation, hypothesis testing and regression analysis.
4. *Construct* effective models of decision making situations using principles of professional spreadsheet design.
5. *Compute* optimal solutions to decision making models for the management of a wide range of situations in which quantitative analysis improves decision making.
6. *Analyze* spreadsheet simulation models and decisions with uncertain outcomes by using multiple criteria for optimality and risk.

COURSE MATERIALS

1. MindTap® Business Statistics, Instant Access for *Business Analytics: Data Analysis and Decision Making*. 6E. S. Christian Albright & Wayne L. Winston. 2017.
 - Online software includes e-text, videos of worked examples, flashcards and many other study resources and is required to complete graded problem sets and quiz assignments.
 - May purchase directly from Cengage, or printed access card from the UNCG bookstore (ISBN 978-133-709-4993). A free trial is available until Sep. 2nd. This is helpful if you are waiting on financial aid or want to try the e-text before purchasing a printed copy.
 - Access to a printed copy of the text, in addition to the e-text included with Mindtap, is optional though you may find it helpful. Here are options for acquiring a printed copy:

- Mindtap with Loose Leaf Text (ISBN 978-133-735-8446)
 - Full hard copy of 6th Edition (new) with Mindtap (ISBN 978-133-735-8859).
 - Rent or buy used a 5th or 6th Edition copy from external retailer (e.g. Amazon)
2. Laptop installed with MS Excel 2010 or later and the following add-ins: *Solver*, *Analysis Toolpak*, *SolverTable*, *Palisade Decision Tools Suite (StatTools, @Risk, PrecisionTree, NeuralTools, TopRank, and Evolver)*. Mac users see notes on Canvas regarding your options.
 3. **Course Pack.** Digital or hard copies via **Harvard Business Publishing**. See link on Canvas.

COURSE WEBSITE

The course website is <https://uncg.instructure.com/> (Canvas). Announcements, slides, spreadsheets, supplementary notes, assignments and grades will be posted to Canvas. Please confirm that you are receiving Canvas notifications in your inbox.

COURSE SCHEDULE

A summary of lecture topics, assignment due dates, and exam dates is provided in Canvas under *Syllabus* or under *Calendar*. The schedule is tentative; some areas may take longer while others may finish more quickly. Due dates and details for upcoming assignments are available in the *Assignments* section. To review details of any lecture or assignment click on the hyperlink provided in the *Syllabus*, *Assignments*, or *Calendar* sections of Canvas.

COURSE POLICIES

1. Course Format. This course meets for one semester of instruction with time devoted to lecture, guided computing exercises, in-class lab assignments, and case discussion. Prior to class, complete the assigned reading and exercises.
2. Graded Assignments. Your course grade is comprised various assignments including two exams, weekly problem sets, weekly quizzes, an excel refresher, and two case studies. If necessary, changes to due dates below will be updated via Canvas.

Assignment Group	Due	Weight
Exam 1	10/12, 2-4:45 PM	25%
Exam 2	12/12, 3:30-6:30 PM	25%
Problem Sets	Weekly. Tuesdays at 11:59 PM 11 Problem Sets. Drop lowest.	20%
Quizzes	Weekly. Tuesdays at 11:59 PM 11 Problem Sets. Drop lowest.	10%
Case Report 1	Initial Report due 10/4, 11:59 PM Discussion 10/5, 2-4:45 PM Final Report due 10/11, 11:59 PM	5%
Case Report 2	Initial Report due 11/29, 11:59 PM Discussion 11/30, 2-4:45 PM Final Report due 12/6, 11:59 PM	5%
Prep Quizzes + Overall Contribution	Weekly prep quizzes. Wednesdays at 1:30 PM. Few other participation-based assignments	5%
Excel Tutorial	8/30, 11:59 PM	5%
	Total	100%

3. Grading Criteria.

Your final course average will determine your minimum course grade according to the following table. You may increase your course grade through **strong class participation**.

Letter Grade	F	C	C+	B-	B	B+	A-	A
Minimum Numerical Score	<68	68	78	80	82	88	90	94

The following criteria will apply to the grading of assignments.

A: Work demonstrates clear understanding of the material under study, but also a superior ability to utilize that material in the assignment. All criteria are met. Work goes beyond the task and contains additional or outstanding features.

B: Work demonstrates a good understanding of the material, and utilizes the material well in the assignment to meet the criteria with few errors or omissions.

C: Work minimally demonstrates a basic or technical understanding of the material under study, and uses some relevant material in the assignment. Work may not address one or more criteria or may not accomplish what was asked.

F: Work is incomplete, inappropriate, or shows little or no comprehension of the material

4. Bring your laptop to every class to follow along with demonstrations and participate in lab exercises. It is strongly recommended that you bring your textbook to every class to follow along. Bring case materials on days of case discussion. Tip: download all relevant files before class so that you have them available regardless of the UNCG Network status.

5. Exams. Exams will be given at the dates and times listed in the above schedule.

- Exams are open note, open book, open laptop, but no communication of any kind is allowed, either verbal, written, or electronic except with the instructor. Cell phones must be turned off and stowed away.
- You must notify the instructor at least 1 week prior if you have a conflict for an exam. Documented proof may be requested for a make-up exam to be scheduled.
- Requests to correct grading errors must be made within one week of return of grades.

6. Problem Sets & Quizzes. Weekly assignments help you develop proficiency in critical thinking and keep pace in the course as future material builds on earlier material. **Problem sets develop your analytical abilities** and help you to master the variety of quantitative skills covered during the class. **Quizzes strengthen your knowledge of important concepts** covered during class and in the readings. **Most weeks one problem set and one quiz will be due by Tuesday at 11:59 PM.** Both types of assignments will be **delivered in MindTap**, the online software accompanying the text. Each student must individually attempt and comprehend all of the problems. Students are encouraged to work together in pairs or small groups so long as each student submits his or her own work. Students are allowed 3 attempts on each assignment. Some questions may change with each attempt.

7. Case Report assignments are posted on Canvas. **You may work in 3-4 member teams for the case project reports, but all students should be individually prepared to discuss the case in class.** Each team will submit one report (MS Word or PDF) and one Excel workbook by the due dates above. The initial case report will be due prior to the case discussion, helping you and your team to prepare the case materials prior to discussion. The final case report will be due after the case discussion.

Initial and final case reports should begin with an executive summary of the key issues of the case, your methodology, and your recommendations. Describe your assumptions, methods, and answers to any case questions in the body of the report. Reference in the report any work completed in an attached Excel file.

Participation in case discussion is an important part of your grade. The instructor assigns case discussion grades based on the quantity and quality of your participation. The quality of participation is measured by how well you explain your own critical analysis, contribute original ideas, make comparisons based on outside experience or readings, offer critical questions for the class to consider, respond to questions raised by others, and offer feedback to your teammates. **If you plan to miss a case discussion, please notify the instructor one week in advance so that an appropriate make-up assignment may be issued.**

Self-evaluation and peer evaluations for case assignments will be required and an individual's grade may be penalized if there is sufficient evidence he/she has not taken acceptable responsibility for the assignment or does not complete the evaluation. Case teams should discuss expectations at the start of the semester. **All team members should take responsibility for making sure all parts of the assignment meet the agreed expectations.**

8. Excel Refresher. Throughout the course students will use Microsoft Excel extensively as it is one of the most powerful and widely available tools for quantitative analysis across all functions and industries of business. **The course itself, however, is not a course in how to use Microsoft Excel**, but rather a course in how to analyze and interpret important business problems using quantitative analysis methods. **You are expected to begin the class with a foundation of core Excel skills already established and it is your responsibility to improve your Excel skills on your own outside of class** if necessary. The Excel Refresher will help you to assess your preparedness for using Excel in the course, build the necessary fundamental skills, and practice areas of weakness. In order to earn any credit for the assignment, you must obtain an 80% level of proficiency on the quiz, but you may take the assignment up to 3 times before the due date.
9. Prep Quizzes & Class Participation includes being prepared for class, being involved in class discussion, and being engaged with the material outside of class. You are expected to be thoroughly prepared to discuss assigned readings and cases. You may be called upon at any time to share your perspective, work with other students, or respond to a question. You are encouraged to attend office hours and email the instructor with questions and insights. Participation is essential because: 1) discussion about a business situation is most fruitful with multiple perspectives; 2) articulating your thoughts and questions demands that you be clear and precise; 3) it promotes critical thinking and maximizes your learning efficiency. Effective communication and participation are vital business skills in any organization.

To award you for completing the readings and preparing the practice exercises prior to class meeting times, prep quiz assignments are due weekly at 1:30 PM on Wednesdays. These short, simple quizzes give you a head start on the new material for the week. The assignments will be delivered in MindTap and you are allowed 3 attempts. Other simple assignments, graded mostly for completion, may be added to this assignment group throughout the semester at the discretion of the instructor.

10. UNCG Academic Integrity Policy. You are expected to be familiar with and abide by the UNCG Academic Integrity Policy. The Policy may be found at:

<http://sa.uncg.edu/handbook/academic-integrity-policy/>

On team assignments, each individual team members must take responsibility for all parts of the assignment or face a potential penalty. On individual assignments, you are not to share details of your work including computer files or printed output from your computer analysis. Prohibited actions also include working together side-by-side on separate computers. Specifically, on exams you are not to communicate with others in any way or share any of the exam materials with others. Violations of the Code will result in penalties ranging from an F on the assignment to an F in the course.

11. Bryan School Faculty Student Guidelines. The Bryan School faculty has approved a set of guidelines for the conduct of classes. They can be found at the following link

http://bae.uncg.edu/wp-content/uploads/2012/08/faculty_student_guidelines.pdf

Non-class use of laptops, phones and tablets is prohibited and is a distraction for you and those around you. Please step outside to handle any urgent emails or phone calls. The instructor reserves the right to dismiss you from the course if you continue unapproved use of technology-enabled devices during class meetings after a warning.

Be professional.

Have integrity.

Treat the classroom like a business meeting.