LINCOLN UNIVERSITY
BA 360 – Quantitative Methods for Business and Finance Management
Fall 2012 Course Syllabus

Course Number: **BA 360**

Course Title: **Quantitative Methods for Business and Finance Management**

Units: 3 (45 lecture hours)

Semester Offered: Fall 2012

Course Meeting Days: Thursdays

Course Meeting Time: 6:30PM – 9:15PM

Course Meeting Place: TBD

Instructor Information:
    Name: Daniel Sevall

    E-Mail Address: dsevall@lincolnuca.edu

    Office Location: Room 407

    Office Hours: TBD

1. Course Description

While solving a problem, managers must consider both qualitative and quantitative factors. This course covers quantitative methods which help to solve different business problems. Techniques include decision analysis, regression models, forecasting, transportation, and assignment models, Markov analysis, stochastic equations, statistical quality control and others (3 units)

2. Learning Objectives
Given that the Microsoft Excel spreadsheet usage is so prevalent in modern-day business, this course requires that students gain the utmost comfort level using Microsoft Excel.

After completing this class, students should be able to:

- Analyze and use simple descriptive and predictive analysis tools
- Describe business risk and build appropriate models for helping decision-makers quantify this risk
- Use payoff tables and decision-trees to characterize risk and/or uncertainty
- Apply statistical inferences, like confidence intervals and hypothesis testing, to characterize business risk

- Apply basic regression analysis to estimate relationships between two variables
- Use Microsoft Excel's Solver in linear programming problems (i.e. Transportation and Assignment problems, as well as Cost Minimization and Profit Maximization)

3. Instructional Methods:

Lecture method is used in combination with the case studies to provide a rich learning experience for the student. The course requires the practical use of Microsoft Excel spreadsheets and the Internet to solve quantitative problems in business. The emphasis will be on learning by doing. Every student must participate in an intensive classroom activity. Reading, writing, and problem solving assignments will be made throughout the course.

4. Instructional Material and Texts

The course text will be the following:

S. Christian Albright, Wayne Winston., Christopher Zappe, *Data Analysis and Decision-Making with Microsoft Excel, 3rd edition*, Southwestern College Publishers, 2008, ISBN-10: 0324662440

Online Components of the Course

I will create a YahooGroups as a means of posting information, and offering an opportunity for you to ask questions regarding course material. I will plan on adding students to the Yahoo site, once the class rosters are finalized.

5. Academic Honesty Honor Code

The faculty, administration, and staff recognize their obligation to provide continuing guidance as to what constitutes academic honesty and to promote procedures and circumstances that will reinforce the principle of academic honor. Fundamental to the principle of independent learning is the requirements of honesty and integrity in the performance of academic assignments, both in the classroom and outside. Students should avoid academic dishonesty in all of its forms, including plagiarism, cheating, and other forms of academic misconduct. The University reserves the right to determine in any given instance what action constitutes a violation of academic honesty and integrity.

6. Diversity

A diverse classroom is a better classroom. Sharing our experiences and our ideas contribute to our better understanding of the material. I will be committed to ensuring that all students receive the attention needed to grasp the key accounting concepts for this class. To that end, all questions relating to the course material will be answered in a timely fashion.

7. Requirements

All students are required to attend the class. Continuous assessment is emphasized. Students must complete all assignments and take all quizzes, mid-term exam and final exam ON THE DATES DUE. Plagiarism will result in the grade "F" and a report to the administration.

8. Assessment

A. <u>Exams:</u>
- Students must take a midterm and a final exam. The midterm will cover material from the first half of the course. The final exam is *comprehensive* and covers the material from the entire semester.
- Make-up exam policy: Students must take the exams as scheduled. No make-up exam will be given.
- Partial Credit is awarded on exams for problems (not multiple choice) when the computations are shown. Show all work on problems for maximum partial credit.
- Students may use laptops or programmable calculators. While these may help students in the calculation of certain accounting problems, ultimately the student will need to use critical reasoning to be successful in this course.
- Students may e-mail me to be informed of their respective grades.

B. <u>Homework:</u>
- Homework sets and due dates will be posted regularly.
- Solutions to some homework problems will be reviewed in class.
- Critical thinking essay, cases, and problems are included as part of the regular homework and class demonstration problems.

9. Grading and Assessment Criteria

Midterm Exam	15%
Case Studies (4x)	40%
Final Exam	35%
Participation	10%
Total	100%

Letter grades will be given based on the following scaling:

A	90 - 100
B	80 - 89
C	70 - 79
D	60 - 69
F	0 - 59

10. Expectations for Students

A. <u>Attendance:</u>
- Attendance at all classes is essential to acquiring the requisite information for successful completion of this course. The topics covered in this course are much related to each other. If you miss a lecture, it would be hard to catch up. Roll will be taken at the beginning of each session. Students are expected to show up to every class meeting and stay for the entire period.
- Students may attend either session of the lecture as space permits. Students must attend the exams during the session in which they are registered unless prior permission is obtained.
- Students are required to inform the instructor in advance by email or verbally in case of not being able to attend class.

B. Class Participation:
   - Class participation is very essential to learning this subject. Be prepared to participate in class discussions (answering the questions and solving the problems), group work, and reviewing the homework.

C. Student Code of Conduct:
   - Students are expected to respect the instructor and each other. Students must turn off their cell phones and pagers during the entire class time.

11. Course Schedule
Include dates of class meetings, topic, assignments, and assignment due dates.

Classes 1 and 2

Background Readings

1. Albright   Ch 1 "Introduction to Data Analysis and Decision-Making"
2. Albright: Ch 2 "Describing Data: Graphs and Tables"

Assignment

Case 1.1 Entertainment on a Cruise Ship
Case 2.2 Automobile Production and Purchases

Classes 3 and 4

Background Readings
1. Albright: Ch 3 "Describing Data: Summary Measures"

2. Albright: Ch 4 "Describing Data: Summary Measures"

Assignment

Case 3.1 The Dow Jones Average
Case 4.1 Edu Toys
Selected Problems Chapters 1-4

Classes 5 and 6

Background Readings

1. Albright: Ch 5 "Probability and Probability Distributions"
2. Albright: Ch 6 "Normal, Binomial, Poisson and Exponential Distributions"

Assignment
Case 5.1 Simpson's Paradox
Case 6.1 EuroWatch Company

Classes 7 and 8

MIDTERM EXAM: Class 7

Background Readings

1. Albright: Ch 7 "Decision-Making under Uncertainty". This will be for week 8.

Assignments
Case 7.2 Westhouser Paper Company

Classes 9 and 10

 Background Readings

1. Albright: Ch 8 "Sampling and Sampling Distributions"
2. Albright: Ch 9 "Confidence Interval Estimation"
3. Albright: Ch 10 "Hypothesis Testing"

 Assignment
Case 8.1: Sampling from Videocasette Renters
Case 9.2: Employee Retention at D&Y
Case 10.4: Deciding Whether to Switch to a New Toothpaste Dispenser

Classes 11 and 12

Background Readings
1.   Albright: Ch 12 "Regression Analysis: Statistical Inference"
2.   Albright: Ch 13: "Time Series Analysis and Forecasting"

Assignment
Case 12.3: Developing a Flexible Budget at the Gunderson Company
Case 13.2: Forecasting Weekly Sales at Amanta

Classes 13 and 14

Background Readings

1.   Albright: Ch 14 "Introduction to Optimization Modeling"
2.   Albright: Ch 15 "Optimization Modeling Applications"

Assignment
Case 14.2 Sonoma Valley Wines
Case 15.3 Durham Asset Management

Final Exam

12. Disclaimer
This syllabus is subject to modification. I am committed to letting students know changes to the syllabus as soon as feasible.

Last Update: 8/20/2012