

Business Analytics

22-QA-380-001

MW 4:00 – 5:45pm, Lindner 112, Fall, 2009-2010

Instructor: Zhiyuan Dong
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Office Hours: MW 2:00-3:30pm and by appointment

Prerequisites: QA281: Business Statistics I QA282: Business Statistics II
ACC281: Intro. to Accounting I ACC282: Intro. to Accounting II
BusAd 151: Mgt Skills Prac I BusAd 152: Mgt Skills Prac II
BusLaw280: Legal Environment IS270: Principles of Info Systems

Texts: Anderson, David R., Sweeney, Dennis J., and Williams, Thomas A., Martin Kipp An Introduction to Management Science: Quantitative Approaches to Decision Making, 12th Edition, South-Western, Thomson Learning,. (required)

Course Objectives:

1. Develop skill in recognizing situations where quantitative analyses are a valuable modeling tool.
2. Develop skill in formulating, analyzing & interpreting commonly encountered math models.
3. Develop a solid background in the basics of linear & integer programming, transportation & transshipment modeling, personnel assignment, queuing analysis, simulation, & decision analysis.
4. Acquaint the student with currently available software packages for analyzing mathematical models. Microsoft EXCEL Solver will be employed for problem solving.

Grading Policy:

Midterm	40%
Final Exam	20%
Individual Assignments	10%
Final Project	30%

Individual Assignments:

Students are encouraged to work in groups to help understanding the course materials. However, homework must be submitted individually. No copy and paste are allowed. Students should use digital drop-box in the UC blackboard system to submit homework.

Final Project:

Final project can be completed on a group basis. Students are encouraged to form project groups of size no more than five persons per group. Final project will involve developing, formulating, and solving an optimization model using the materials covered in this course. Students can choose project topics. Project proposals are due on 2009-11-14. Students are welcome to discuss with the instructor about the project topic as the course progresses. A professional project report is due on 2009-12-9. Project proposals and final projects should be submitted via the UC Blackboard digital drop-box.

Exams:

All exams will be CLOSED BOOK and CLOSED NOTES. Any necessary formulas and tables will be provided. Calculators will be used during the exam. Calculators may not be shared during the exam. An unexcused absence from an exam will be recorded as a ZERO. An excused absence will be granted only for an absence that meets both of the following conditions: 1) the instructor is notified PRIOR to the exam or 2) the instructor APPROVES the absence. In the case of an excused absence, a make-up exam will be rescheduled.

Incomplete Policy:

The college policy will be followed. No incomplete will be given without prior approval from the instructor (incompletes are extremely rare). Students receiving incomplete must contact the instructor the first week of the immediately following quarter to arrange a method for completing the course.

Withdraw Policy:

The College policy will be followed. No withdrawals will be permitted after Nov 19th 2009

Tentative Schedule

week	date		
1	9/23/2009	1	Course Introduction; Introduction to Operations Research (Ch. 1)
	9/28/2009	2	An Introduction to Linear Programming (Ch. 2)
2	9/30/2009	4	Linear Programming: Sensitivity Analysis and Interpretation of Solution I (Ch. 3)
	10/5/2009	5	Linear Programming: Sensitivity Analysis and Interpretation of Solution II (Ch. 3)
3	10/7/2009	6	Formulating Linear Programs I (Ch. 4)
	10/12/2009		No Classes
4	10/14/2009		
	5	10/19/2009	7
10/21/2009		8	Integer Linear Programming I (Ch. 7)
6	10/26/2009	9	Integer Linear Programming II (Ch. 7)
	10/28/2009	10	Distribution and Network Models I (Ch. 6)
7	11/2/2009	11	Distribution and Network Models II (Ch. 6)
	11/4/2009	12	Midterm Exam: 4:00-5:45pm
8	11/9/2009	13	Waiting Line Model (Ch. 11)
	11/11/2009		Veterans Day
9	11/16/2009	14	Simulation I (Ch. 12)
	11/18/2009	15	Simulation II (Ch. 12)
10	11/23/2009	16	Multicriteria Decisions I (Ch. 14)
	11/25/2009	17	Multicriteria Decisions II (Ch. 14)
11	11/30/2009	18	Forecasting I (Ch. 15)
	12/2/2009	19	Forecasting II (Ch. 15)
12	12/7/2009	20	Fina Exam 4:00-6:00pm