BUS 264 Statistical Literacy for Managers

Note:
Like BUS 379, this class meets nearly every week due to the content and need for additional contact time to complete the QR project requirements.
See Draft Calendar on Page 4

INSTRUCTOR: Marc Isaacson

OFFICE HOURS: By Appointment on M/W/F
Office Located in Memorial 215
Also generally available by telephone and e-mail.

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TEXTS: *Data Analysis & Decision Making with Microsoft Excel 3* , by Albright, Winston and Zappe.

Additional Information will be provided in electronic format via Moodle including articles, cases, and supplementary readings.

In the classroom, we will be using Microsoft Excel 2007 possibly along with the software add-in @Risk from Palisade Software. The software provided with the textbook is compatible with older versions of MS Excel.

OBJECTIVES: The student who successfully completes this course should:

1. Understand the presence of variation in business data and be able to achieve business goals by planning, predicting and managing variation.
2. Read and interpret statistics presented as evidence for management decisions
3. Analyze business situations and identify appropriate non-financial performance measurements.
4. Understand the life cycle of survey data by creating a survey and reporting the results in written form
5. (optional) Be able to model business situations using Monte Carlo simulation software

PREREQUISITES: MPG3 and MIS 260 or approval of instructor with demonstrated proficiency in Microsoft Excel including formulas, functions, pivot tables, scenario manager and other advanced features.

EVALUATION:

1.	Quizzes	15%
2.	Mid-Term Exam	25%
3.	Homework / Case Studies	30%
4.	Course Project	15%
5.	Presentation	10%
6.	Attendance / Participation	5%

Final grades will be determined based on overall percentages, with 94% required for a 4.0, 88% for a 3.5, 82% for a 3.0, 76% for a 2.5, etc.

POLICIES:

Homework: The best way to learn statistics and software is to use it, so you will have a fair amount of homework. Homework will be collected at the beginning of class. **Late homework will not be accepted at full credit unless approved in advance. Late assignments will have points deducted.** You can call and let me know why you are not coming to class the day it is due. Some extra credit opportunities may be provided to make up missed points. Cooperation among students is encouraged as long as each student physically produces his/her own homework (i.e. does all the typing).

Attendance: It is important that students attend class. Some material will be covered in class that is not in your texts. Students who miss more than 6 class hours without an approved excuse may have their overall grades reduced by .5 grade.

Honesty: In accordance with Augsburg's academic honesty policy, students will sign a statement at the beginning of the course to reaffirm student honesty. Any student found cheating on a quiz or exam will automatically receive a 0 on that item and the incident will be reported to school administration.

Makeup Tests and Quizzes: Must be approved in advance by instructor. Leave a message on my voice mail in case of last minute emergency.

Use of Computer Classroom: Students are encouraged to help each other during class to learn the software tools. It is very important that students actively participate in class. Students are not permitted to use the computers for work not being covered in class and will be asked to leave if they are doing so. Please respect others and be sure that your cell phones and other devices are turned off during class time.

SOFTWARE:

Students can purchase microcomputer software at substantial discounts (about 50% off) through the online website www.journeyed.com. Student discounts are also available on hardware, but many local stores/mail orders are very competitive. Currently, the best offer I've seen by far for purchasing the entire Office 2007 suite is $60 directly from Microsoft at http://www.theultimatesteal.com/home.asp

COMPUTER LAB:

You will need an AugNet account with **user id and password** to access the network. If you do not have one, contact the IT department on the second floor of the Lindell Library. Computers are available 24 hours/day in the Urness dorm. You can also use PCs or laptops in the library.

SIMULATIONS / HOMEWORK / CASE STUDIES

This course will build on student knowledge of Excel from MIS 260 and may integrate the use of simulation software (@Risk) to complete business oriented case studies and homework assignments. These activities will provide the students a chance to learn how to model, predict and make business decisions to manage variation. Besides focusing on the technical spreadsheet models, significant emphasis will also be placed on the communication of the analysis in written executive summaries.

PRESENTATIONS

Prepare a **short** (5-10 minute) presentation on one of the following topics. This can be done individually or as a group of two students. Presentations will be given in our final class period. You will submit a proposal to let me know the intended topic for your presentation so I can advise on reference materials and avoid duplication of topics among students

Potential Topics

Data Mining	SPC / Process Control	Your Course Project
ISO 9000	TQM	Or
Kaizen	W. Edwards Deming	Selected Simulation Cases
Lean Manufacturing	Yield Management	
Six Sigma		

COURSE PROJECT

This course project will give you a chance to develop a hypothetical data collection survey regarding a topic of interest to you, whether personal or professional. We will use technology to generate your survey data set and get respondent answers to your survey questions. By the end of the project, you will apply the statistical tools we are learning in the course to your personal survey dataset.

By the time you finish this project, you should have gained confidence and knowledge in the process of data collection, analysis, and interpretation. Since we will be using technology to randomly generate answers to your survey questions, you will have to "listen" to the data to generate your conclusions and interpretations.

Deliverables for the project include the following:

- Survey Questions and Sampling Plan
- Descriptive Summary Statistics
- Tabular and Graphical Summaries
- Comparisons between / within variables
- Scatterplots / T-tests / Regression
- Confidence Intervals
- Written report of entire project including Executive Summary and learning reflections

Tentative Winter WEC 2008 Evening Schedule (Version #1)

DATE	TOPIC	READINGS DONE	HW DUE
Jan 14th (4 hrs)	Intro to Data Analysis and Decision Making Graphs and Tables	Chapter 1 and 2	
Jan 21st (Online Activities)	Online Activities Only No Class due to MLK Day Assembly and Social Construction "Definitions Matter"	See Moodle for details	HW #1
Jan 28th (4 hrs)	Summary Measures of Data Getting the Right Data	Chapters 3 and 4	HW #2 Quiz #1
Feb 4th (4 hrs)	Comparisons / Descriptions Probability Distributions Exam Review	Chapter 5	HW #3 Quiz #2 Project Component #1
Feb 11th (1.5 hrs)	Exam #1	Exam #1	HW #4
Feb 18th (4 hrs)	More Probability Distribution Reading Graphs and Tables	Chapter 5	HW #5 Project Component #2
Feb 25th (1.5 hrs)	Normal / Binomial Distributions	Chapter 6	
March 3rd (4 hrs)	Estimation and Confidence Intervals	Chapter 9	Quiz #3 Revised Component #2 HW #6
March 10th (1.5 hrs)	Associations / Correlation	Chapter 11 Schield Text?	Project Component #3 Presentation Proposal due June 1st
March 17th (4 hrs)	Regression Final Presentations (4 – 6 individuals)	Chapter 11	Project Component #4 HW #7
March 24th	No Class – Day after Easter	Spring Break	
March 31st (4 hrs)	Final Project Submission And Final Presentations (Remainder of Class)		Project Component #5