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INFO 965-01 Spreadsheet Applications for Decision Making

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COURSE SYLLABUS

INFO 965–01: SPREADSHEET APPLICATIONS for DECISION MAKING

Spring 2007

MEETING PLACE: Hailstones Hall 15

INSTRUCTOR: Dr. Debbie Tesch

E-MAIL: tesch@xavier.edu

OFFICE HOURS: M 1:00-3:00

T 2:30-5:30

R 1:00-2:00 Or by appointment

OFFICE: Hailstones 213

WEB SITE: blackboard1.xu.edu

TELEPHONE: 745-3377

FAX: 745-3455

Much required contact for this course can be accomplished via email which is closely monitored and responded to promptly. Email is most often timelier than the ever elusive office hours

TEXTS***

Gross, D., F. Akaiwa, K. Nordquist, B. Littlefield.

Succeeding in Business with Microsoft Office Excel 2005: A Problem-Solving Approach,
Thomson 2006

DESCRIPTION

This course extends a students' basic Excel skill base and introduces the use of Excel to manage day-to-day business functions in the areas of marketing, accounting, operations management, sales, and human resources. Students will learn to obtain, maintain, manipulate, structure, and display information used to support decision making in business. Through this course, students will develop a practical understanding of problem solving using spreadsheets. Topics covered will include retrieving data through the use of lookups, evaluating the financial impact of data, organization of data for analysis using data tables and Excel scenarios, enhancing decision making using Solver, and troubleshooting techniques that ensure error-free applications.

WILLIAMS COLLEGE OF BUSINESS MISSION: "We educate students of business, enabling them to improve organizations and society, consistent with the Jesuit tradition."

COURSE OBJECTIVES:

1. To analyze data and solve real-life business problems using Excel
2. To review and apply fundamental Excel skills
3. To expand the Excel skill base to include frequently used Excel skills
4. To apply logic in decision making
5. To organize data for analysis
6. To perform What-If analyses using data tables and scenarios
7. To troubleshoot and customize workbooks
8. To use critical thinking and analysis to find efficient and effective problem solutions
9. To review current literature describing the application of spreadsheets to problem solving and decision making in the workplace.

MATERIALS REQUIRED

Data disk files for use with Excel may be obtained from a self-extracting Winzip archive found on the course Blackboard OR on the Course Technology website at www.course.com. Instructions for extracting the data files may also be found at the course web site under Course Information. In order to have files available for instructor access in the classroom and/or office, it is **strongly** recommended that files be stored on a USB drive, zip disk, or in your student folder on the network. Any assignments collected electronically may be placed in the course folder (T:\Classes\INFO965-S2007-Tesch) or attached to an e-mail message.

CLASS TIME APPROACH

The goal of *Spreadsheet Applications for Decision Making* is to offer students the opportunity to apply mechanics of Excel skills to the solution of real-world problem solving. As such, class time will focus on the problem to be solved with attention to the Excel skill mechanics used to solve the problem. Lecture/demonstrations will introduce the chapter problem and Excel tools available to solve the problem. During the lecture/demo portion of the class, students will have the opportunity to either concentrate on the

demonstration or follow along independently using provided Excel workbooks available on the Course Documents page of the course web site.

Additionally, we will explore fairly current literature related to the use of spreadsheets for problem solving/decision making in organizations. All students will prepare a one page abstract of the assigned readings to prepare for class participation. For each of 14 readings (**beginning 1/23**), a pair of students will be responsible for acting as presenter and discussant (a la conference style) of the related article. This exercise should be completed in approximately 30 minutes.

Group project: (Beginning 2/20/07): Groups of 2 or 3 will form to complete analysis of a data set (provided by a member of the group) from within an organization. This data will have been cleansed of sensitive information and will offer the group an opportunity to apply skills from course material to a real business problem. During the last 2 weeks of class, this analysis will be presented to the class for discussion.

Exams: There will be 2 exams covering material from the textbook and required readings.

Lab Work: Lab emphasis will focus on the “how” and “when” of using Excel tools. For this reason, it will be assumed that each student has completed the Level 1 text material for a chapter prior to the class related to that chapter. Solutions to the Chapter exercise, Chapter Case, and Steps to Success for Level 1 will be posted by the Monday before the chapter material is introduced in class. Lab assignments for course credit will come from Level 2 and 3 materials, primarily end-of-chapter cases.

To comply with institutional security policies, the generic login feature has been removed from lab and classroom computers. Students are required to login with their MyXU username and password. Students can check and change their passwords using the *Account Management* feature on the MyXU login page <http://myxu.xu.edu/cp/home/loginf> . Students should remember to logout at the end of each class session. After 10 minutes of inactivity the computers will enter a secure screen saver. The user will then have 10 minutes to stop the logout by re-entering their password.

Grading: A grading rubric will be provided for each lab assigned for credit.

CLASS POLICIES

- I will take attendance at every class period. This is simply for my information and will only come into play if attendance is poor.
- Assignments are to be submitted on the due date. Late assignments will not be accepted. A score of 0 will be recorded for any assignment received beyond the due date.
- Grade tracking and averaging is the responsibility of the student. Blackboard will be kept up-to-date for your convenience.

ACADEMIC HONESTY

“All work submitted for academic evaluation must be the student’s own. Certainly, the activities of other scholars will influence all students. However, the direct and unattributed use of another’s efforts is prohibited as is the use of any work untruthfully submitted as one’s own.” The penalty for violation of this policy will be a zero for that assignment if it is a first offense. Subsequent violation will result in an **F for the course**.

EVALUATION

Assignments	Grade %	Grade Distribution
Midterm Exam	25%	90 – 94 A-
Final Exam	30%	87 – 89 B+
Excel Cases (15%) / Article abstracts (5%)	20%	83 – 86 B
Reading Presentation/Discussion	10%	80 – 82 B-
Group Case Presentation	15%	77 – 79 C+
		73 – 76 C
		70 – 72 C-
		Below 70 F

REQUIRED READINGS BIBLIOGRAPHY

(.pdf files of required readings are found in the Required Readings folder under Course Documents on the Blackboard.)

- Balakrishnan, J., & Chun Hung Cheng. (2005). The theory of constraints and the make-or-buy decision: An update and review. *Journal of Supply Chain Management: A Global Review of Purchasing & Supply*, 41(1), 40-47. **(Reading #12)**
- Beaman, I., Waldmann, E., & Krueger, P. (2005). The impact of training in financial modeling principles on the incidence of spreadsheet errors. *Accounting Education*, 14(2), 199-212. **(Reading #8)**
- Bewig, P. L. (2003). In excel, cell names spell speed, safety. *Journal of Accountancy*, 196(5), 68-71.
- Caulkins, J. P., Morrison, E. L., & Weidemann, T. (2005). Spreadsheet errors: Are they undermining decision making in your organization? *Public Manager*, 34(1), 22-27. **(Reading #13)**
- Caulkins, J. P., Morrison, E. L., & Weidemann, T. (2006). Are SPREADSHEET ERRORS undermining DECISION-MAKING in your organization? *Nonprofit World*, 24(3), 26-28. **(Reading #13)**
- Cunha, C. B., & Mutarelli, F. (2007). A spreadsheet-based optimization model for the integrated problem of producing and distributing a major weekly newsmagazine. *European Journal of Operational Research*, 176(2), 925-940. **(Reading #11)**
- Gary, L. (2004). Want better results? boost your problem-solving power. *Harvard Management Update*, 9(10), 3-6. **(Reading #1)**
- Gross, T., Ozluk, O. A paradigm for spreadsheet engineering methodologies. *European Spreadsheet Risks Interest Group 5th Annual Symposium, Klagenfurt, Austria, 2004* **(Reading #4)**
- Iyer, B., Shankaranarayanan, G., & Lenard, M. L. (2005). Model management decision environment: A web service prototype for spreadsheet models. *Decision Support Systems*, 40(2), 283-304. **(Reading #9)**
- Kruck, S. E. (2006). Testing spreadsheet accuracy theory. *Information & Software Technology*, 48(3), 204-213. **(Reading #14)**
- Martin, A. G. (2005). Get spreadsheets under control. *Internal Auditor*, 62(6), 31-35. **(Reading #7)**
- McGill, T. J., & Klobas, J. E. (2005). The role of spreadsheet knowledge in user-developed application success. *Decision Support Systems*, 39(3), 355-369. **(Reading #2)**
- Morini, M. (2005). Long live the spreadsheet: Leveraging Microsoft Excel for effective BPM. *Business Finance*, 11, 24-29. **(Reading #6)**
- Osborne, J. D. (2005). Converting data to information for case study analysis. *Decision Sciences Journal of Innovative Education*, 3(1), 137-141. **(Reading #3)**
- Panko, R. (2007). Two experiments in reducing overconfidence in spreadsheet development. *Journal of Organizational and End User Computing*, 19(1), 1-23, **(Reading #5)**
- Rasmussen, R. (2007). QAP—not so hard in spreadsheets. *Omega*, 35(5), 541-552. **(Reading #10)**

CLASS SCHEDULE

(This is a guide only and may be changed/updated periodically. Updates to this guide will be announced in class and posted on the Assignments page of the Blackboard.)

Week of	Class Topics	Text Pages	Presentation	Assignment
1/16/07	Course Introduction / Skill Survey Introduction to Problem Solving – PP CHAPTER 1 Applying Fundamental Skills and Tools in Problem Solving	pp 18-65		Chapter 1 – Level 3 Case Problem (pp 69-71) DUE: 1/23/07
1/23/07	CHAPTER 2 Solving Problems with Statistical Analysis Tools	pp 72-139	Reading #1: Gary Presenter: Discussant:	Chapter 2 – Level 2 Case Problem (pp 141-142) DUE: 1/30/07 Chapter 2 – Level 3 Case Problem (pp 142-145) DUE: 1/30/07
1/30/07	CHAPTER 4 Applying Logic in Decision Making	pp 204-264	Reading #2: Bewig Presenter: Discussant:	
2/06/07	CHAPTER 5 Retrieving Data for Computation, Analysis, and Reference	pp 272-338	Reading #3: McGill Presenter: Discussant:	
2/13/07	CHAPTER 3 Determining Effective Data Display with Charts	pp 148-202	Reading #4: Osborne Presenter: Discussant:	
2/20/07	Complete Text Chapter Discussions – Cases Begin Group Project Problem Analysis → Problem Statement		Reading #5: Gross Presenter: Discussant:	
2/27/06	EXAM #1 Text Chapters 1, 2, 4, 5, 3 Readings 1 – 5		Reading #6: Panko Presenter: Discussant:	
3/06/07	SPRING BREAK (3/5 – 3/9)			

Week of	Class Topics	Text Pages	Presentation	Assignment
3/13/07	CHAPTER 6 Evaluating the Financial Impact of Loans and Investments	pp 346-408	Reading #7: Morini Presenter: Discussant:	
3/20/07	CHAPTER 7 Organizing Data for Effective Analysis	pp 346-408	Reading #8: Martin Presenter: Discussant:	
3/27/07			Reading #9: Beaman Presenter: Discussant:	
4/3/07	CHAPTER 8 Using Data Tables and Excel Scenarios for What-If Analysis	pp 478-540	Reading #10: Iyer Presenter: Discussant:	
4/10/07			Reading #11: Rasmussen Presenter: Discussant:	
4/17/07	CHAPTER 9 Enhancing Decision Making with Solver	pp 542-591	Reading #12: Cunha Presenter: Discussant:	
4/24/07	CHAPTER 10 Troubleshooting Workbooks and Creating Excel Applications Begin Group Presentations	pp 592-646	Reading #13: Balakrishnan Presenter: Discussant:	
5/1/07	Complete Group Presentations		Reading #14: Caulkins (2) Presenter: Discussant:	
5/8/07	FINAL EXAM 6:00 – 7:50			