



Course Name	Advanced Excel Skills for Business
Course, Section	CAPP125C-2, Section 3133 – Spring 2007 (1 unit)
Class Schedule	Online - Friday, March 2 nd – Saturday, April 14 th
Instructor	Susan Carrier
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Description	2007 CVC Award Program – Final Report

This Final Report is a detailed description of the project submitted for the 2007 CVC Award Program. It contains a description of the course development for CAPP125C-2 Advanced Excel Skills for Business and the objectives met during the project.

Section 1: Background

CAPP125C-2 is the result of a two year project to create a series of classes in Microsoft Excel that would more closely match the learning objectives of the students.

Prior to this project, MSJC was offering only the typical semester-long course in Excel. As one of the Excel instructors, I saw four key problems with this course...

1. Because this was the only Excel course offered, all students were thrown into the same classroom regardless of their experience level. There is a huge difference between a student who has never seen a spreadsheet and one who has worked with spreadsheets for many years but is looking to learn the more advanced features of the software. This is frustrating for the instructor who must try to make every class meaningful for the full spectrum of students, but more importantly for the students stuck in a class progressing much too quickly or too slowly for his experience level.
2. Typically MSJC has a significant amount of student drops between week one and week eighteen of the semester. In the traditional Excel class, this drop rate is extremely high. The majority of the drops are not because the students are unhappy with the class. The students I spoke with all agreed that the class was great, but that they had already met their learning objectives before the mid-term and they were not yet experienced enough in using the software to make use of the advanced features and techniques covered in the later portion of the class. Thus, the eighteen week course was not an efficient use of their time and it was easier to drop the course than to struggle with assignments designed for students with significantly more Excel experience.
3. The typical Excel course and textbook are designed to teach the features of the software. However, this approach gives the student no practical experience in how to utilize the features and techniques to solve problems in their everyday workload. In addition, the textbooks include many features that are very seldom used in business. I wanted to design a course with the opposite approach – start with typical business problems, then teach the specific features and techniques that can be used to solve those problems.
4. The accounting instructors at MSJC were looking for a way to give their accounting majors a good background in Excel – an essential skill for anyone in the accounting profession. But the typical Excel class is not geared toward accounting projects and contains very little practical knowledge in how to use Excel in an accounting environment. A separate course, specifically designed for

accounting users, would be a valuable addition to the accounting certificate program and a valuable learning experience for an accounting professional as well.

The result of this project was the design of three 1-unit courses in Excel, each course lasting 6 weeks:

CAPP125C-1 - Excel Basics for Business

An introduction to Microsoft Excel. The course focuses on the basic features of Excel, as well as useful techniques for using the software for business applications. Students will work with spreadsheet formatting, formulas, functions, and charts. Designed for students with little or no experience.

CAPP125C-2 Advanced Excel Skills for Business

Advanced Excel skills for business users. The course focuses on features and techniques for improving business productivity using Excel. Topics include Auto Subtotals, Filters, Pivot Tables, date and time formulas, LOOKUP and IF functions. Designed for students with at least 6 months experience in Excel.

CAPP125C-3 Using Excel for Accounting Projects

Excel skills for accounting professionals. This course uses case studies to illustrate features and techniques in solving common accounting problems. Topics include scenarios, goal seek, trend analysis, financial functions, and graphs. Designed for students who have completed ACCT 124 and CAPP125C1 or have one year experience in both accounting and Excel.

These courses were designed and submitted to the curriculum committee in the fall of 2005. During the Fall 2006 semester, I taught the courses in an on-campus format. This semester, the course was moved to an online format. For me, the challenge was to recreate the dynamic learning environment of my classroom in an online environment. My classroom lectures include dozens of helpful hints gathered in over 20 years of data analysis. Re-creating this valuable information in an online format would be a difficult and time-consuming challenge.

Section 2: Course Description

CAPP125C-2 – Advanced Excel Skills for Business

For submission to the 2007 CVC Award Program, I selected the 2nd of the 3 new courses. This class clearly demonstrates the unique approach of the project, focusing on real world challenges and the learning objectives of the student, rather than the software features of Excel.

Course Description

Advanced Excel Skills for Business Users. This course focuses on features and techniques for improving business productivity using Excel. Students will work with advanced spreadsheet features including formatting, formulas, functions, and charts. Designed for students with at least six months experience in Excel. This is the second of three 1-unit courses for which completion of all three parts is equivalent to the 3-unit course CAPP125C.

Course Objectives

- Increase speed and accuracy by utilizing shortcuts and specialized techniques
- Design a spreadsheet utilizing a wide range of advanced functions to summarize and analyze data
- Design effective business forms and reports using advanced Excel features
- Create meaningful charts and graphs

Required Text

Special Edition Using Microsoft Office Excel 2003 by Patrick Blattner ©2004 by Que.
[ISBN 0-7897-2953-9]

Optional Text

Excel 2003 Personal Trainer by CustomGuide, Inc. © 2005 O'Reilly Media, Inc. [ISBN 0-596-00853-8]
Students looking for a review of basic Excel features are encouraged to add this text (This is the text used for the first class in the series, CAPP125C-1 Excel Basics for Business)

The required text for this course is not a typical classroom text, but rather a regular Barnes and Nobel type software book. This unique selection was made for 3 reasons: First, it allowed me the flexibility to design the course around weekly "Challenges" rather than software features; Second, the text is an excellent desk reference which is a valuable addition to the bookcase of any Excel user; and lastly because the text is readily available in any bookstore or online at a price (\$39.99 MSRP) much less than a traditional textbook. With an enrollment fee of only \$20 for the 1 unit class, a traditional textbook costing over \$75 can place the course out of reach of many students at MSJC.


Class Schedule – March 2nd thru April 14th, 2007. Class enrollment at the start of the class was 33 students. 13 students completed the class. Most of the dropped students sent me emails saying that life circumstances had prompted their withdrawal. Several plan to take the class again at a future date.

Class Structure

The class is organized into 6 modules, one for each of the 6 weeks of the class. Each module focuses around a series of three "challenges" which the student needs to solve in order to complete the assignment. Lectures and text focus on the features and techniques which will assist in solving the challenges.

Challenge 1A: Text Functions

My boss just gave me a list of employees that he wants printed, but the names and addresses are all messed up! How can I straighten out all this data without having to re-type hundreds of records?



#1 - Change the case of **State** so that it prints in uppercase
 #2 - Change the case of **Status** so that it prints in lowercase
 #3 - Change the case of **Department** so that it prints in upper and lowercase
 #4 - Shorten **ZipCode** so that only 5 digit zip is shown
 #5 - Find the rows with city names over 12 characters long, so they can be abbreviated
 #6 - Combine the **City, State** and 5 digit **Zip** columns into one cell
 #7 - The Street Address field contains a bunch of extra spaces. Remove them.
 #8 - Change Employee name to print **LastName, FirstName**

Emp #	Employee Name	Department	Status	Street Address	City	State	ZipCode
5051	Lucy Gramm	A/P	Active	505 West Park Ave.	Blaine	mi	49905-8712
1080	John Smith	MARKETING	Active	3081 77 St.	Blaine	mi	49905-2890
5910	Jason Gramm	SALES	Active	Rt 8, Box 109	Blaine	mi	49905-7428
7064	Stan Billings	operations	Active	55 Sugar Lane	Bloomington	mn	49908-1213
5890	Louis Landgo	export	ACTIVE	4545 Washington Ave.	Bloomington	mn	49908-3019
1541	Julie Swanson	ACCOUNTING	Active	85 Lake Shore Dr.	Bloomington	mn	49908-6687
4917	Anna Billings	shipping	Active	1717 Louis Court	Bloomington	mn	49908-9640
4650	Julie Landgo	FINANCE	Active	206 E. Park Bend	Bloomington	mn	49908-6122
4630	Anne Olson	Sales	ACTIVE	608 Van Burren St. #8	Brainerd	mn	55010-7414
4548	Nancy Timsclift	A/P	ACTIVE	741 280th St.	Brainerd	mn	55010-7092
4625	Jennifer Jordon	FINANCE	ACTIVE	189 Industrial Blvd.	Brooklyn Center	mn	55220-8874
3530	Janelle Olness	ACCOUNTING	ACTIVE	223 Lake St.	Brooklyn Center	mn	55220-9023
5900	Jason Trent	MARKETING	ACTIVE	87 91 st St.	Brooklyn Center	mn	55220-3347
5076	John Jordon	A/P	Retired	P.O. Box 99	Brooklyn Center	mn	55220-7577
5880	Muriel Berndt	FINANCE	Active	754 W. 91st St.	Duluth	mn	55815-3175
5225	John Kinkaid	ACCOUNTING	Active	104 Lonsdale Blvd.	Duluth	mn	55815-2169
5056	Wendy Nelson	MARKETING	Active	803 Turtle Rd.	Duluth	mn	55815-4069
3535	Amy Thomas	operations	Active	100 Front Blvd	Duluth	mn	55815-3067

Presentation of Materials

Learning materials consist of a series of handouts, video lectures, FAQ topics, text assignments, and web links.

The video lectures were particularly valuable in replicating the learning environment of the classroom. In this way, the online version of the class is even better than the on campus version because a student can watch a video lecture over and over again if needed to absorb the content. He can attempt the assignment and then view the lecture again to clarify areas of confusion.

Web resources are used as additional reinforcement for features and techniques used in class. In addition to the links provided within the course, the discussion boards encouraged students to find other useful websites containing descriptions, discussions or examples.

The comments from the students said that the assignments were quite challenging, yet they felt that the topics were useful to them in their “real world” and with the material provided were completed in a reasonable amount of time.

Learning Assessment

Student progress toward the learning objectives was measured using a combination of weekly assignments and quizzes, each designed to cover a specific set of software features and techniques.

The final exam consisted of one worksheet, utilizing over a dozen functions and features from the assignments. Students were given one week to complete the exam.

Collaboration

Replacing the student interaction of a classroom is the biggest challenge of online instruction. This course utilizes two techniques to address this issue: First, the students participated in a series of weekly discussion boards on topics related to spreadsheet design; second, the students participated in a group project to research Excel functions and features (other than the ones included in this class) and design a “challenge” similar to one of the weekly assignments.

Online Office Hours

In order to insure that students could ask questions and have access to additional assistance when needed, I conducted a series of web-based “Office Hours” conferences utilizing the services of CCC Confer. Typically, between three and six students attended the web conference.

By far, the most valuable part of the web conference was not the students’ questions. I was amazed at how few questions there were. The questions could have easily been handled by email or the discussion boards I set up to deal with questions.

For the students, the value of the conference was just knowing that my assistance was available. But for me, the critical importance was to give me a gauge of how well the students were doing. Because of the innovative design of the class, the lack of a typical textbook, and the fact that this was my first semester teaching online, it was a tremendous help to me in fine-tuning the content of the class.

Section 3: Project Objectives & Results

For the purpose of the CVC Award Program, the design objectives for this project were as follows:

Design Objectives

1. Design and implement a series of video lectures.

The class contains 16 video lectures (2½ - 16 minutes long), each covering the topics for the week's assignments. I also provided the students with a copy of the "script" for the lecture. This enabled the student to focus on the lecture without having to take notes and provided them support during their assignment without having to replay the lecture (this was extremely popular with the students).

The students raved about the video lectures. Many reported watching them several times as they read through the book and attempted the assignments.

2. Design and implementation of a FAQ (frequently asked questions) section in anticipation of student problems. By utilizing this format, I had hoped to reduce the delay in helping a student who is "stuck" on an assignment.

This surprised me by being the least valuable part of the course. The students had fewer questions than I expected and were much less "lost" than I thought possible in an online class. As a result, I struggled to make up questions that students might have regarding the topics, rather than having dozens of actual questions from students.

3. Redesign course handouts from the on campus version to facilitate their use in an online format.

Most handouts were distributed in PDF format, so that the students could see the result of the assignment without being given a completed spreadsheet. This also allowed me to retain the fonts and layouts of the materials.

Designing an "Orientation Module" containing all of the background the student would need to navigate the course was an amazing amount of work. I borrowed a lot of text from experienced online instructors and redesigned the module several times to reduce the feeling of "information overload."

4. Schedule a series of web-based "Office Hours" via CCC Confer.

I conducted five web conferences, each with three to six students attending. There were fewer questions on the assignments than I expected, but there were students that were more inexperienced in Excel that ran into issues that most experienced users would have recognized. For the most part, these were handled effectively in the discussion boards set up for assignment help, but in some cases where a student doesn't understand the question he needs to ask, the web conference was a valuable synchronous communication tool.

The most valuable discussions were those in which I assisted students with their group projects, either brainstorming ideas or clarifying acceptable parameters.

The only difficulty I had was in trying to archive my Office Hours. For some reason when using application sharing, the archive would freeze up and drop the screen share. After several attempts, I simply gave up. Since there were so few assignment issues discussed, the archives would have been of limited value to the other students anyway.

- 5. Design and implement a series of discussion boards to focus on important issues in spreadsheet design. Students will be asked to find Excel examples from their own work environment or on the web to illustrate design concepts and utilize critical thinking skills in analyzing the effectiveness of a variety of spreadsheet design techniques.**

The discussion board topics worked extremely well in three ways: First, they allowed the students to share ideas and create an additional learning dimension to the class; second, they encouraged students to bring the “real world” into the class, relating how they have used or could use the features discussed; and third, some of the discussion boards required that they locate web resources that they can access in the future to continue to expand their skill level after the class has ended.

- 6. Design and implement a series of weekly quizzes and a final exam to assess the student’s progress toward the learning objectives.**

I designed each quiz as a question pool so that I can continue to add to the randomly generated group of questions presented to the student.

The final exam consists of one worksheet which utilizes over a dozen of the most important features covered in the class.

- 7. Design and implement a group project to encourage collaboration in a shared learning environment. Project will consist of spreadsheets which the group will enhance, utilizing the feature and techniques learned in class.**

The group project was the most challenging assignment to design. My objectives for the assignment were to not only get students to interact between themselves, but to use the project as a way to encourage them to explore other features of Excel and to find ways to continue to expand their Excel skills after the class has ended.

The project required the students to design a “challenge” similar to the weekly assignments which form the structure for the class. The features used could not be any of the ones covered in this class, so they were required to research other features and combine them into an appropriate business problem that could be solved using those features.

The student’s comments on the projects are attached to the assignments, posted in the discussion boards and included in the evaluation survey at the end of the class. Although the challenges of working together were significant, most students felt that the group assignment was a very valuable lesson.

- 8. Course will be held March 2nd – April 14th, so completion of the project by the April 21st deadline will obviously be necessary.**

Course was completed as scheduled and grades submitted.

9. Course will be ADA compliant.

In order to better understand the needs of the disabled student and assist me in meeting the ADA requirements, I met with one of the college's disability counselors. He demonstrated the screen reader software and allowed me to "see" my course from the perspective of a visually impaired student. It is an experience I would encourage every online instructor to have. The most effective teaching techniques are developed when the instructor is able to place himself in the "shoes" of the student.

The only portion of this class which required special accommodation for compliance was the video lectures. To meet the requirements, I included a captioned version of the video lectures.

A Final Word...

When I first took on the challenge of creating this online course, I was hesitant. I felt that this course might not be as great a learning experience as my on campus class.

I have several friends and co-workers who have taken online classes and none of them had the opinion that they offered a "fantastic" learning experience. Sure, online classes are convenient and flexible, but most students I know find them frustrating and unduly time-consuming. And for courses containing complex concepts and assignments, it seems many instructors do not make the extra effort to ensure that their students get the assistance that they need when they get lost.

In preparing for this challenge, I attended several classes and conferences, including the San Diego conference last summer. Without exception, the experienced online instructors I spoke to told me, "Don't worry, the first class that you teach online will be terrible...but you will get better at it!" I know they were trying to be encouraging, but for me it was a nightmare. If I could not provide a fantastic learning experience to every one of my students, I wanted no part of it!

In addition, because of the unique nature of this course, it would have to be designed with none of the packaged materials that publishers routinely provide for online instruction. I think I have read every Excel text ever written and none of them provided the kind of "start with the problem" approach I needed for this class.

In designing this class, I read dozens of books, taught myself several software applications, and spent many sleepless nights designing and re-designing the content.

The most difficult part turned out to be the most unexpected. Finding a video format in which the resolution was acceptable and which did not leave the student waiting 40 minutes or more for a download was excruciating! Unfortunately, the experienced instructors I contacted were not able to assist me. As a result, I digested more material about video production settings than I ever wanted to know. Several of the video lectures had to be re-recorded more than once to achieve the results I wanted.

I had originally planned to use a Picture-In-Picture (PIP) video of my hands on the keyboard for some of the videos. I finally had to abandon the idea because I could find no one who could help me solve the technical issues.

If creating video lectures was this tough for me, with over 20 years experience in software, I can only imagine what it must be like for an instructor who is unfamiliar with computer systems!

I began this project as a personal crusade to prove that even as a novice online instructor, I could design and execute a class that was not only as good as the campus version, but in many ways better. In that, I believe I have succeeded. (Perhaps some of that is delirium from months of sleep deprivation....)

But, the success of this class cannot be measured by the completed assignments or the grades in the gradebook. Most of my students are less concerned about their grade than they are about the skills gained which will be directly applicable in their employment. The success of this class can be measured in the comments from the students in the evaluation survey at the end of the class. Nearly all of the comments were extremely positive -- and they are the ultimate judge of my success....

"It was very easy to get around the classroom!"

"I felt that Susan was very quick to answer my questions and the other students, quicker than most instructors. I also thought the class was very well put together and easy to stay on track."

"I LOVE the video lectures; It simulated a classroom situation and having Susan show how it's done is much easier than just reading it out of a book."

"I loved the video lectures. They explained a great deal and the visual was immensely helpful. I could not complete the course without them. Susan's presentation on video is excellent. She should write a book including her video instruction."

"I enjoyed the conference hours with Susan. I could ask her questions, and she would put that assignment on the screen and walk me through any problems I was having. It's nice to be able to ask questions and "see" answers in real time. The conference hours also helped me to get a better feel for what was expected for things like the Team Project."

"I really like the Office Hours sessions and it encouraged me to get my assignments completed before the session so if I had questions I could ask them. I also like the Assignment help - it's nice to be able to put your problem out there and have someone who's doing the same project help."

"I have learned more than I ever would have thought in this class."

"I've learned a lot in this class so far. This is my first online course and it has surpassed my expectations. It's hard to believe an online course can be as effective as a classroom setting."

"This is the first online class I've taken where the teacher did video lectures and Office Hours. They were both very helpful tools. If I got stumped I could go back to the lecture and watch it again. Having the notes was helpful too."

"This is my first online class. My daughter took an online class, and I was not impressed. This class is nothing like hers. This has been challenging and interesting and a great learning experience."

“Great class I can't wait to apply what I've learned to the real business world. Very effective, I would definitely take another online course.”

“I thought the course was great! This was a difficult section with quite a bit of material to learn but it was a fun challenge and I feel I learned a lot.”

“I think that this is probably an exceptional online class. I can't say that I prefer it to the campus setting, but it is the next best thing. I am truly amazed at how much I have learned. Susan is enabling her students to improve their knowledge and skills with Excel so they can meet the needs in the workplace. Susan's videos were my favorite part of the course. It helped to satisfy my need to see Excel in action and hear a real voice.”

“The design of the course was very good. You can tell how much effort you have put into the design and you can feel your compassion about teaching. This online course was more effective than the same course in a campus setting. I would, and have, recommended this class to both friends and co-workers. I like the lectures. I disliked not having extra time to do more practice on modules. Thank you and I will still practice on the challenges. I have learned lots!!!”

“I enjoyed the class I think the most difficult was the group project. I would recommend this to my friends and co-workers. I think with the amount of time I think I would leave the group project out. I could see it if we were in class but I feel that these classes are too fast for the time that is needed for those projects. The communications chats were very difficult to use. Our group had to resort to the phone.”

“I would recommend this class to others as it really does teach you more concepts of using Excel. I liked the individual Module Assignments to me they are fun and challenging. I think not having a team project would be a great improvement as people who take online classes do not have extra time for Team meetings.”

“I think all in all the design is good. I think you trade proficiency for convenience in an online setting. A course of this nature is probably better suited to a classroom. If this was my major I would think twice before taking it online. I would recommend the class to my coworkers as a reasonable option to a night class for a non traditional student. I like the convenience of it being online. It suits my needs. However, even with the technology that is being used, which is very exciting, I feel the quality of the knowledge you gain is not of the quality of the classroom. Just a little more structure should be added to the course, like weekly meetings with office hours with a directed topic. More meaningful use of the discussion boards-no web surfing. I would shorten the scope of the curriculum at both ends. Some of the stuff at the beginning is too rudimentary- along with some of the more complicated functions need to be jettisoned or more time spent on them. I think our teacher is on to something great. She has a lot of experience and is very personable. She communicates well and is a good teacher. Her use of the new technology available is exciting. I would like to see her author a book like the Personal Trainer. Perhaps even produce instructional DVD's. As with any new venture there is fine tuning to consider. This class is no different. I am envious of the students that will take this class down the road as I am sure Susan will tweak and trim and add till it's simply awesome. So with that being said, I will look for classes that are being taught by Susan Carrier again!”