Business Computing (70-110)
Class Syllabus
Spring Semester, 2019

Professor: Tridas Mukhopadhyay
Email: tridas@cmu.edu
Section A

Office: 4207 Tepper Quad
Telephone: X8-2307
Classroom: TQ 2700

Motivation and Objectives:
The objective of this course is to introduce students to the important aspects of IT use in business. In particular, we focus on two major aspects: (a) Individual Computing, and (b) Organizational Computing. While there are many ways business professionals use computing applications, our focus will be on building business decision models using Excel. Besides many aspects of spreadsheet modeling such as Pivot Tables and Charts, What-If Analysis, etc., we will also cover fundamental data management skills. For Organizational Computing, we will begin at a high level with IT strategy followed by fundamentals of information technologies such as hardware, software, networks and security. We then continue with system development, data architecture, and digital products and platforms. Finally, we bring the two aspects of Business Computing together by learning how to develop and analyze business cases for IT investments. We will use spreadsheet modeling to evaluate a specific business case.

Learning Objectives:
Individual Computing Module:

- Analyze financial data with formulas and functions.
- Create various types of charts to summarize data.
- Create data tables and pivot tables.
- Manipulate data in multiple worksheets and workbooks.
- Develop simple excel applications.
- Apply advanced functions and text functions to analyze data.
- Apply financial functions to evaluate financial performance.
- Apply advanced data formatting and filtering tools to analyze data.
- Perform what-if analyses and solve simple optimization problems.
- Develop the business case for Information Technology projects.

Organizational Computing Module:

- What is an Information Systems and how does it work?
- How do we develop new Information Systems?
- What are the components of Information Technology infrastructure? Hardware and software trends?
- What are the major data management problems? What is the relational model?
- What are the major network technologies? How does the Internet work?
- What are the challenges of cybersecurity? How can we protect our data, networks and systems?
- How do Information Technologies support or help redefine business strategy?
- How do the major enterprise systems such as ERP, CRM and SCM work?
- How are digital products and markets redefining businesses?
- How can we use major Artificial Intelligence tools in Business?

Tentative Schedule

Session	Section A	Topic	Work Due
1	Mon: Jan14	Introduction, Excel Intro	Tut. 1
2	Wed: Jan 16	Formatting and Formulas	Tut. 2-3
3	Wed: Jan 23	Charting Data	Tut. 4 Home Work 1: Jan 29 Tu
4	Mon: Jan 28	Tables, Pivot Tables	Tut. 5
5	Wed: Jan 30	Worksheets/Workbooks	Tut. 6 Home Work 2: Feb 5 Tu
7	Mon: Feb 4	Excel Application	Tut.7
8	Wed: Feb 6	Mid-Term I Preview	
6	Mon: Feb 11	No Class!	Mid-Term I 6:30-8:00 pm
9	Wed: Feb 13	Advanced Functions	Tut. 8
10	Mon: Feb 18	Financial Tools/Functions	Tut. 9 Home Work 3: Feb 26 Tue
11	Wed: Feb 20	What-If Analyses	Tut. 10
12	Mon: Feb 25	Text Functions	App A
13	Wed: Feb 27	Adv. Filter/Formatting	App B-C
14	Mon: Mar 4	Information Systems	Ch. 1 Home Work 4: Mar 5 Tue
15	Wed: Mar 6	Mid-Term II Preview	
S	P R	I N G B	R E A K!
16	Mon: Mar 18	System Development	Ch. 12
17	Wed: Mar 20	Hardware and Software	Ch. 5
18	Mon: Mar 25	Data Management	Ch. 6
19	Wed: Mar 27	No Class!	Mar 26-Mid-Term II 6:30-8:30 pm
20	Mon: Apr 1	Data Management	
21	Wed: Apr 3	Network and Mobile	Ch. 7
22	Mon: Apr 8	Case Discussion	
23	Wed: Apr 10	Security	Ch. 8 Carnival: April 11
24	Mon: Apr 15	IT Strategy	Ch. 3
25	Wed: Apr 17	Enterprise Systems	Ch. 9 Team Assignment 3: Apr 18
26	Mon: Apr 22	Digital Products / Markets	Ch. 10
27	Wed: Apr 24	Decision Support	Ch. 11 Team Assignment 4: April 25
28	Mon: Apr 29	Course Review	
29	Wed: May 1	Case Discussion	

Final Exam: TBA

Course Materials:

1. New Perspectives on Microsoft® Office 365™ & Excel® 2016, Comprehensive, by Parsons/Oja/Carey/ DesJardins, ISBN: 978-1-305-88040-5, Cengage Learning, Boston
2. Essentials of MIS by Kenneth C Laudon and Jane P Laudon, 13th Edition, 2019, ISBN 978-0134803050

Expectations:

I expect all students in the course to attend each class and to actively participate in class discussions and exercises. I try to foster an informal, hands-on approach to learning. Much of what will be presented and discussed in class is available only, or primarily, in class. I expect you to do all required reading before class. The readings are often a starting point for in-class lecture and discussion and generally provide a framework for the day's lecture. The required readings are intended to provide the minimum background necessary to make sense of the material presented in class. **The preparatory readings are not a good substitute for attending and actively participating in class**. Much of the benefit that you derive from the course will come from the in-class exercises and discussion.

Class Etiquette:

In the interest of providing a comfortable environment for learning, I ask that you observe the following points of etiquette.

- I expect you to arrive to class on time. Coming in late disrupts and distracts the rest of the class. Likewise, I expect you to stay until the end of the class. It is not appropriate to wander in and out of the classroom during lecture.
- Be respectful of other members of the class.
- Turn your phone off during class. Having your phone ring in class will result in a "0" grade for that day's participation.
- You can use your Laptop computer only when you are asked to do so. Your smart phones must be turned off during lecture and discussion. Texting, browsing the web, or using anything with a screen during class is not only disrespectful to the Professor, it is also highly distracting to your fellow students. One common request that I get from students on anonymous surveys is to enforce this rule aggressively in class.

Evaluation

You will be evaluated in this course based on demonstrated mastery of the skills and concepts taught. You will demonstrate this mastery by applying the concepts and skills to class discussions, activities, homework assignments, and exams. To support the learning goals, your evaluation will be based on the following criteria:

Homework Assignments (40% of total grade):

- 4 **individual** assignments. These assignments will each be technology-based assignments in which the student is primarily demonstrating mastery at using Excel as a tool in its own right. Ideally, there will be some business-related structure and story around the assignments but the evaluation is almost entirely done around the use of Excel. (20% of total grade, combined)

- 4 Business-related **team** assignments. The first assignment relates to answering class discussion questions as a Team whereas the second assignment will focus on Case Discussion. The third assignment will involve analyzing data management problems. The last assignment will build a business case supporting a proposed IT project (Mid-West Distributor Case), which will include Excel analysis to support the business justification, and presentation of results. (20% of total grade, combined)

Midterm exams (25% of total grade):

There will be two midterm exams worth 10% and 15% of your total grade. The first exam will last 60 minutes, and the second exam will last about 90 minutes.

Final exam (25% of total grade):

There will be a final exam worth 25% of your total course grade. This closed book exam will be given during the Final Exam week and last about 2 hours.

In-class Participation (10% of total grade):

You are expected to attend each class and actively participate in discussion and in-class exercises. I will evaluate your class participation as a combination of objective factors (attendance, frequency of contribution) and subjective factors (quality of contribution). In general, the quality of your contributions is much more important than the quantity. In addition, there will be about 8-10 random short quizzes over the semester.

Statement on Academic Integrity:

The university's policies on academic integrity govern the class. These policies are available at:
https://www.cmu.edu/policies/student-and-student-life/academic-integrity.html

Collaboration: The ability to collaborate with others to solve problems and produce items of value is a tremendously important skill. To that end, I encourage you to collaborate with other students in the class in discussing reading and lecture material and evaluating your ideas and concepts. As mentioned in the discussion of using external resources, however, **everything that you turn in to be graded must be your (or your team's) own work**. The actual documents, homework answers, case analyses, etc. that you submit must have been produced, developed, and written by the person or team submitting them.

Accommodations for Students with Disabilities:

If you have a disability and have an accommodations letter from the Disability Resources office, I encourage you to discuss your accommodations and needs with me as early in the semester as possible. I will work with you to ensure that accommodations are provided as appropriate. If you suspect that you may have a disability and would benefit from accommodations but are not yet registered with the Office of Disability Resources, I encourage you to contact them at access@andrew.cmu.edu.

Student Wellness

It is important that you maintain a healthy work / life balance. I have structured the class thoughtfully to distribute the work over time to give you the ability to manage the work. If you need help at any time, either in understanding or managing the work, it is your responsibility to seek my help and advice.

If you or anyone you know experiences any academic stress, difficult life events, or feelings like anxiety or depression, we strongly encourage you to seek support. Counseling and Psychological Services (CaPS) is here to help: call 412-268-2922 and visit their website at http://www.cmu.edu/counseling/. Consider reaching out to a friend, faculty or family member you trust for help getting connected to the support that can help.