

APEC 1201: Applications of Excel in Economics and Management

Revised 7 Nov 2023

Term: Fall 2023

Instructor: Stephen Pitts <pitts071@umn.edu>

Class Room: Learning and Environmental Science 230

Class Time: Tuesday/Thursday 11:45 AM – 12:35 PM

The classroom is available until 1:30 PM

Office Hours: Tuesday 2:30 PM – 3:30 PM Waite Library

Course Description

This course offers students the opportunity to learn the basic and intermediate functionality of Microsoft Excel, and apply those skills to economic and managerial applications such as wage growth, accounting, basic regression analysis, demand and cost estimation, and resource allocation.

In addition, this course also emphasizes competencies regarding presenting and discussing quantitative information: interpreting quantitative/graphical data, demonstrating quantitative literacy, determining how to effectively share data display with charts, and making clear choices about the graphical presentation of data.

This course will enable students to become proficient in assembling and presenting data using Microsoft Excel. Students that plan to take 3000+ courses in APEC will use Excel intensively and will gain the most from the course.

Course Objectives

You will learn best practices on communicating quantitative information, as well as understanding how to organize data to make the best use of Excel's tools. These tools will prepare you to work produce clear, replicable analysis, and will teach you to communicate effectively with fellow analysts.

You will learn:

- Basic applications and function in Microsoft Excel
- How logical operators can reveal new relationships in your data
- Best design principles for displaying information in tables and graphs
- Helpful applications of data organization, and how to simplify these applications in Excel
- How to use the ToolPak and Solver Add-Ins to solve common problems in Applied Economics

Time Expectations

This is a one credit course. According to university policy, students are expected to work an **average three hours per week** for one credit in the full spring and fall terms, **or six hours in the summer or half semester terms.**

Course Structure

You are expected to:

- Keep up with the material
- Complete assignments testing your knowledge
- Provide clear analysis, and review the clarity of the work of your peers
- Communicate with me if material is proving difficult or confusing
- Communicate with me if you have any special considerations like health or emergency concerns that may warrant some schedule flexibility

Required Course Materials

This course is designed with the expectation that students supply their own computers during class. If you do not have a laptop, please contact the instructor, so I can arrange for you to use one of the Department laptops during class.

If you do not have Excel, consult the course Canvas page to download a license of Office 365 through the University account.

There is no required reading for this class, but students may be interested in checking out the following from Waite Library or Magrath Library

Show Me the Numbers: Designing Tables and Graphs to Enlighten, Second Edition, Stephen Few, June 2012, Analytics Press

Communication with the Instructor

1. The best way to communicate with me is in person, either during class or after class in office hours.
2. Before you write to me, first look for solutions in the Excel Help Bar.
3. Second, trying writing to the Canvas discussion board to see if other students are having similar questions.
4. The next best way to contact me is by Canvas Message. Please include the word “question” in the subject line.
5. I do my best to reply to your messages within 24 hours, but my responses will be within regular business hours (Monday thru Friday 9am-5pm).
6. I am also happy to meet with you after class, in my office hours, or at another time if you feel you need a discussion to clarify something. If you do, please email me first and we can set up a meeting.

Assignments

There are four kinds of assignments in this class.

1. Exercises test your understanding of Excel functions and applications and typically take 50 minutes to complete.
2. Discussions ask you to critically think about the material and apply what you learned and typically take 10 minutes to complete.
3. Reviews are a check of understanding of terminology and typically take 10 minutes to complete.
4. The Final Memo is a comprehensive document that typically takes 12 hours to complete, you are expected to be working on this throughout the semester, do not wait until the last minute. As part of your Discussion Assignments, you will also evaluate a draft of the final memo from your peers. You will then provide feedback that can be incorporated into their final draft of the memo.

The assignments sum to 100 points. If you want to calculate your current grade, add up the score of all of your current points, divided by the total possible score on those assignments.

| ASSIGNMENT TYPE | COUNT * POINT VALUE | TOTAL POINTS |
|-----------------|----------------------|--------------|
| REVIEWS | 14 * 0.5 points each | 7 |
| DISCUSSIONS | 8 * 0.5 points each | 4 |
| PEER REVIEW | 3 * 3 points each +1 | 10 |
| EXERCISES | 7 * various points | 53 |
| FINAL MEMO | 26 points | 26 |
| TOTAL | | 100 |

Grading Criteria

Grading is on an A-F basis:

| | | | | | |
|----|--------------|----|-------------|----|----------------|
| A | 93.00-100.00 | B- | 80.00-82.99 | D+ | 67.00-69.99 |
| A- | 90.00-92.99 | C+ | 77.00-79.99 | D | 63.00-66.99 |
| B+ | 87.00-89.99 | C | 73.00-76.99 | D- | 60.00-62.99 |
| B | 83.00-86.99 | C- | 70.00-72.99 | F | 59.99 or below |

There is no extra credit available in this class.

Take note: Any questions or concerns regarding your grades must be brought to my attention, via email, within one week of the grade's posting. DO NOT WAIT until the end of the semester to voice your concerns.

If you are taking this class as S/N,

S is granted at 70.00 and above,

N is granted at 69.99 and below

Schedule

| Module | Date | Topic | Exercise | Discussion | Review | Final Memo |
|--------|-------|--------------------------------|----------|------------|----------|---------------|
| 01 | 10/24 | Introductions | | D1 | R00+ R01 | |
| 02 | 10/26 | Formatting and Navigation | E1 | | R02 | |
| 03 | 10/31 | Functions and Cells | | D2 | R03 | |
| 04 | 11/2 | Logical Operators and Add Ins | E2 | | R04 | |
| 05 | 11/7 | Anatomy of a Table | E3 | | R05 | |
| 06 | 11/9 | Anatomy of a Graph | E4 | D3+D4 | R06 | |
| 07 | 11/14 | Formatting a Graph | E5 | D5+D6 | R07 | |
| 08 | 11/16 | Vlookup and Pivot Tables | | | R08 | Prepare Draft |
| 09 | 11/21 | Data Management* | E6 | D7 | R09 | First Draft |
| 10 | 11/28 | Solver | | D8 | R10 | |
| 11 | 11/30 | Data Best Practices | E7 | D9 | R11 | Second Draft |
| 12 | 12/5 | Peer Review Memos | | | R12 | Peer Reviews |
| 13 | 12/7 | Regression and Visual Basic | | | R13 | |
| 14 | 12/12 | Economic Theory and Management | | | R14 | |
| Final | 12/16 | | | | | Final Draft |

* This class may be hybrid or virtual

Assignments are due by Saturday at midnight at the end of each class-week.

If your assignments are late, you will receive a 10 percentage penalty each day it is late unless you have made arrangements with me beforehand.

If we cannot open your file due to technical difficulties, we will ask you to resolve them within one week. Please check your inbox to ensure you do not need to resubmit an assignment.

Required Policy Statements

The University of Minnesota requires that syllabi include references to the policies on student conduct; use of personal electronic devices in the classroom; scholastic dishonesty; makeup work for legitimate absences; appropriate student use of class notes and course materials; grading and transcripts; sexual harassment; [take a breath] equity, diversity, equal opportunity and affirmative action; disability accommodations; mental health and stress management; and academic freedom and responsibility. Please review them here:

<https://policy.umn.edu/education/syllabusrequirements-appa>