

Stat 200: Introductory Statistics

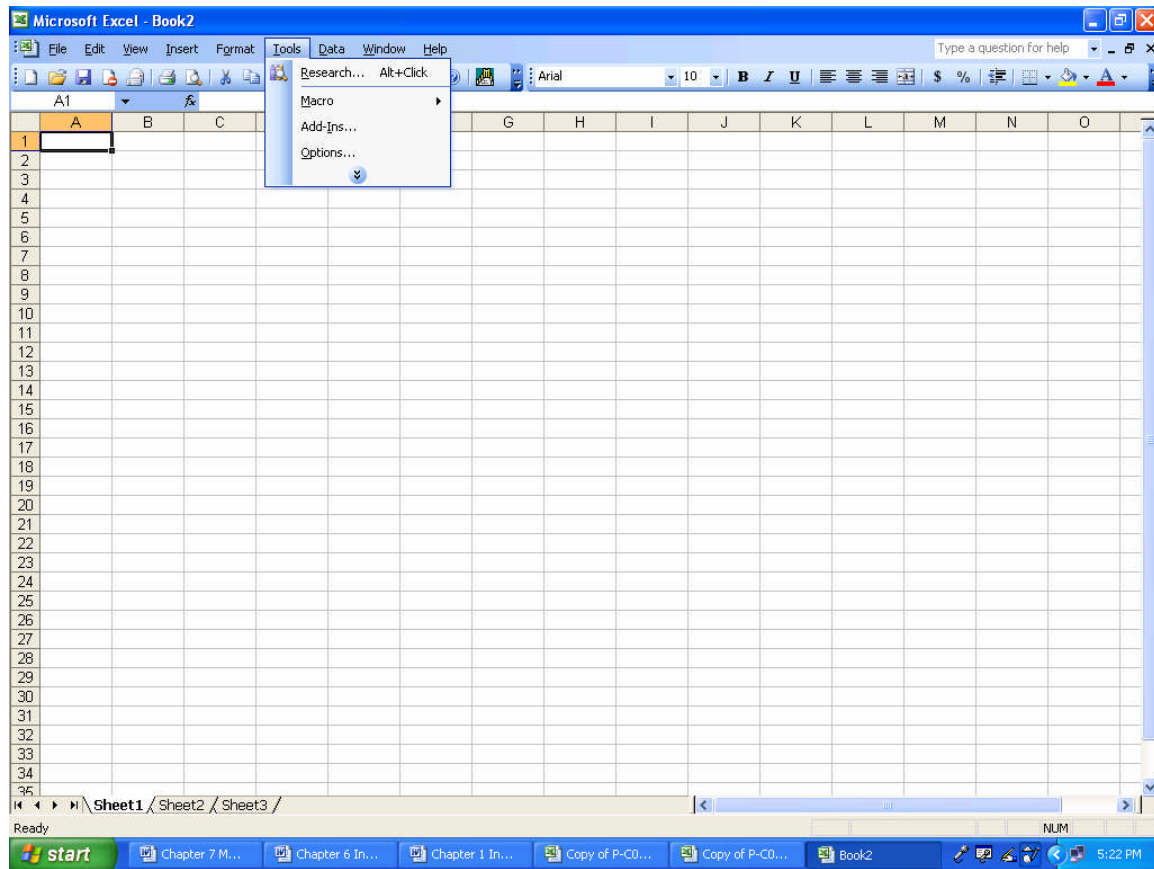
Using Excel for Statistical Analysis

Chapter 1: Introduction

This document is a hands-on guide to using Excel in an introductory statistics course. It is designed for you to sit down at the computer, with a copy of Excel open, and the textbook CD in the drive and actively follow along. At the end of each chapter there is an exercise for you to do alone. Please be patient: Excel is a powerful tool and has something of a learning curve. If something doesn't work straight off, simply try again. The more you work with the program, the easier it will come.

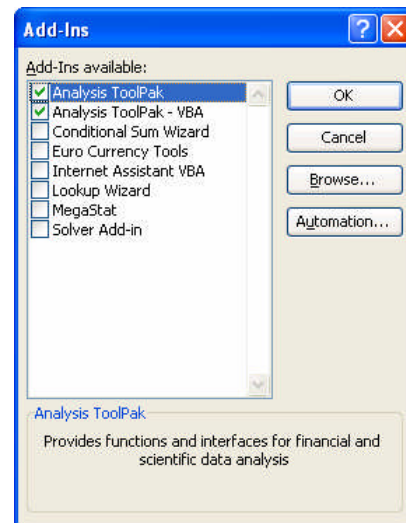
Activating **Data Analysis Toolpak**

In order for you to work successfully with the tools in the document, the **Data Analysis Toolpak** has to be installed and activated in your copy of Excel. To check on the status of your copy, open Excel, then select Tools from the tool bar and select Add-Ins from the drop down menu



This opens the Add-Ins dialog box.

Look for the entries **Analysis Toolpak** and **Analysis Toolpak – VBA**. Check both boxes, and then click **OK**. You are ready to analyze some data! Next time you click on the Tools menu, **Data Analysis** will be listed as a menu item.



Why not MegaStat?

Included with the textbook CD is an Excel add-in called MegaStat. I am sure that this is a fine and easy-to-use product should you wish to install it. I will be ignoring its existence in this guide and in class for two reasons. The first, quite simply, is because Excel is a powerful and relatively easy to use product in its own right. It seems much more sensible

to use the main product as you are likely to find it on other computers. As a product, MegaStat has limited acceptance.

The other reason I don't use MegaStat, is because I've yet to get a copy of it to work! It annoys me that textbook publishers put software on their CDs which have a limited lifespan. It does you no good if your software expires after 60 or 120 days. You want to be able to use it now when you are learning, and in two years when you are applying statistics in another course.

Why not Microsoft Works?

I am occasionally asked about whether Ms Works will do the same things as Excel. The truthful answer is that I don't know, but I doubt it. If you have MS Works on your computer at home, feel free to try, but please don't be too surprised to find that many of the things described here don't work.

One last Word of Caution

Excel is a powerful data analysis tool. Please remember, however, that it was never designed to be a calculator in a statistics (or any other) classroom. Occasionally, we will come across problems in the text that are set up in ways that Excel can't easily handle and we have to develop tricks to persuade it to work. That doesn't mean that there is a problem with Excel, simply that we are using it in a way that it wasn't intended. This particularly occurs when a problem is presented in the text in half-finished form (a completed table is given instead of raw data, for example). Don't worry: there are always work-arounds – that's part of the fun!

How much Excel do you need?

It is easily to get carried away and lose perspective at this stage - after all we have a lot of statistics to learn as well. The goal of STAT 200 is to introduce you to statistics, not to turn you into trained Excel users. Your goal is essentially to learn sufficient Excel for you to be able to use the program to complete both the term project and the final exam using the program. (*Please don't forget that you can't use it on the proctored midterm exam! You also have to know how to do things with a calculator and by hand.*)

In writing this document, I have tried to limit the discussion to things that are necessary for actively doing the statistics and much of it is straightforward: mastering it simply requires a little repetition and practice. Some topics – most notably functions – seem endless however. Depending on your math background, these will either come easily or trigger anxiety attacks. Don't panic. Concentrate on mastering the basics (Chapter 6). If you like working with functions, go deeper - if not, you've probably seen all you need.