

Mathematics, Statistics, and Economics

Christopher Ragan

Many aspects of the design, analysis, and implementation of public policy require modest levels of mathematical, statistical, and economic analysis. You probably learned many of these skills in high school, though perhaps you haven't used them in a while and so they might be rusty. Some other skills, perhaps, you did not learn at all during your high school or university years.

Several courses in the MPP program will require moderate levels of mathematics, statistics, and economics. To ensure that you are fully prepared for the MPP program, please make sure you carefully review the following collections of videos from the Kahn Academy. Some of you can review this material quickly; for others it will take more time and careful study. But our expectation is that all of you will be very comfortable with all this material by the time you arrive at the Max Bell School to begin the MPP program.

A. Some Basic Math

- [Linear equations and functions](#)
- [Solving systems of equations](#)

B. Some Basic Statistics

- [Introduction to probability distributions and expected value](#)
- [Exploring relationships between two variables](#)

C. Some Basic Economics

The two courses in economics in the MPP program (one in microeconomics and the other in macroeconomics) use the following textbooks as core material (in addition to other readings):

- *Microeconomics*, 17th Canadian Edition, by Christopher Ragan, Pearson Education Canada
- *Macroeconomics*, 17th Canadian Edition, by Christopher Ragan, Pearson Education Canada

We recommend that you get the above two textbooks early and begin reading them. In particular, reading the first 5 chapters of the Microeconomics textbook during the summer will prepare you well for the fall term.

In addition, you should review the following videos from the Khan Academy:

- [Basic economic concepts](#)
- [Supply, demand and equilibrium](#)
- [The concept of elasticity](#)