

BPHD 8100 Research Project Guidelines

The goal is to model preferences and behavior of a chosen situation of interest. Pick a topic of interest to you in which agents (people, firms, etc.) make decisions – it may be a static (one period) or dynamic (multiple period) model; the model may include strategic interactions among agents (which would typically involve some game theory, which we will cover shortly) or not; the model may involve uncertainty. The inclusion of these factors depends on the situation you are modeling.

Items that should be included in the paper:

1. Discuss the specific situation(s) that you are attempting to model.
2. An explanation of how you believe that individuals make decisions when faced with your chosen situation. This step should help guide you as to how to model preferences and behavior.
3. Present a formal model of preferences and behavior. It is best to attempt to determine the important components of your specific situation and ensure that your model captures these important features.
4. The model should make predictions about behavior (that is the goal of a model after all). Explain how you would test the model (do predictions match actual behavior). You do not need to actually test the model (so you do not need any data).
5. References to other models in the literature to distinguish your model from currently existing ones. As the Varian article suggests, do not do this first. Work on stripping your problem down to its essential elements and model those first, then go to the literature. The goal is to work on your model building skills and not how well you can use the internet to find articles on the topic.

Papers should be typed – if you are going to use mathematics in your research you may want to invest some time in learning LaTeX or Scientific Workplace or another word processing package that allows one to easily incorporate mathematics into text. Alternatively, Microsoft Word has improved its mathematics editor and you may wish to use it. The length of the paper should be enough to cover all of the relevant topics. Many times grad students feel that longer papers are better, but editors of academic journals regularly ask authors to cut pages from their submitted papers before they will accept them. You should keep what is important in the paper and minimize extraneous language.

Grading:

Grades are based upon how well you address the five points listed above. Having a mathematically rigorous model helps, but an explanation of why the mathematics are useful for your model is also important.

Due Date:

The completed paper is due by the end of our scheduled final exam period, which is 1:30pm on December 11th.