Course Description

This course will cover the basics of contract theory and its application to economic problems. A contract is a set of rules that facilitates interaction among individuals beyond the simplest forms of barter. You have already encountered simple contracts; for example, in the form of spot labor contracts (exchanging leisure for goods) or borrowing and saving agreements (exchanging resources today for resources tomorrow). This course studies more involved contracts. The basic setup will feature the parties involved in the contract having conflicting objectives. In addition contracting will be limited by two types of frictions: we will look at environments where a party in the contract has some valuable, privately observed information; and we will consider environments where at least one party in the contractual relationship cannot credibly commit to it.

Course Goals

My goal in this course is twofold. First, present the theory behind the optimal design of contracts in environments with asymmetric information and limited commitment. Second, show how these optimally designed contracts can find application in different economic contexts. In particular, we will look at applications to optimal taxation, insurance, corporate finance and asset pricing.
By the end of this course you should be able to take an abstract contracting problem and define it formally as a solution to a dynamic program. Whenever possible you should be able to characterize some key properties analytically. Since this class might be one of the last you take in the program, I will emphasize throughout the course, how the tools and models studied might either be applied to you own research idea or used to start developing a research idea.

As a final note, given the time available, I will emphasize breadth of topics rather than depth. I will be available to discuss with you any details relative to the material covered at any time during or after the course.

**Course Materials**

This course will be centered mainly around journal articles (see reading list below). The required textbook is:


Additional useful textbooks (but not required) are:


Finally this syllabus will be continuously updated as the class proceeds, you can get the latest version on blackboard.

**Prerequisites**

The course will build upon the following topics (make sure to refresh them!)

- Game theory: Nash equilibria, sub-game perfection.
- Taxation: Ramsey taxation, refer to:


- Asset pricing: basic results described in [LS12] chapter 8.
Grading

Grading will be based on:

1. Two homework
2. Presentation
3. Comprehensive final exam

In the last week of the course I will ask you to present to the class. I am thinking about individual presentations lasting 10/15 minutes. The idea is to present how you would apply the tools learned in class to your first summer paper. A successful presentation will highlight clearly: 1) why such an extension of your baseline model is interesting; 2) what are the impacts of such a change.

Schedule and course outline

The following is a tentative schedule organized by weeks. As we move along the class I will modify it listing the actual papers covered in each lecture.
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1 Reading List

This is a restricted list of papers that we will touch during the course. It is not meant to be a summary of the current literature.

1.1 Basics: theory and benchmark models


1.2 Important tools


1.3 Decentralization and market as constraints


1.4 Application to optimal taxation


1.5 Application to risk sharing and economic development


1.6 Application to corporate finance


1.7 Application to asset pricing and International finance


References


