Description

This course is designed to introduce economics students to the theory of contracts. The origin of economic contract theory was in the 1970s, and has continued at high speed on both the theoretical and the applied economics fronts. It is used to study settings in which the standard price taking, symmetric information, and complete markets assumptions of general equilibrium theory are violated, thus making GE models inadequate. Non-market institutions determine production and allocation decisions in such settings, and a key ingredient of them is generally a "contract." Most simply, a contract is a set of promises made by two or more agents to each other to perform certain activities e.g., how much of a good to produce, the quality of that good, and how much of it to buy. In most interesting settings there is asymmetric information; some agents know more than others about the state of the world, or what effort choices they made in the past, or about their inherent abilities. The ultimate contracts that are agreed upon are determined via bargaining as opposed to impersonal market exchanges. How a contract is enforced, either explicitly via a third party (Court) or implicitly through the future interactions of the parties, determine in part the nature of adopted contracts.

These are the ideas we shall study. Applications will also be examined, such as regulation, insurance markets, price discrimination, auctions, and hold-up.

Logistics

Professor: Steven Matthews <stevenma@econ.upenn.edu>, office PCPE 618.

Teaching Assistant: TBA

Prerequisites. Intermediate microeconomic theory (Econ 2100, formerly 101). Multivarible calculus (through Math 1080 or 1410), basic probability theory (including continuous random variables, Bayes rule), optimization (first- and second-order conditions).

Teaching Methodology. Lectures. Notes/slides posted on Canvas. Problem sets.

Class Time and Place. TBA

Professor Office Hours. TBA

TA Office Hours. TBA

Assessment. Six problem sets,[1] three in-class exams. Each exam will count 25%, and the problem sets (as a whole) will count 25% towards the course grade. If you

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[1]One of your problem sets that has your worst score will be dropped.

are unable to take an exam for an excused reason,[2] the other two exams and the homework will each count for $33.\bar{3}\%$. Class and online participation will count in borderline cases.

Upload Policy. Upload to Canvas, as one pdf file, your solutions to each problem set, by 11:45pm of the due date (see below).

Required Textbooks

(MP) *An Introduction to the Economics of Information: Incentives and Contracts.* 1st or 2nd Edition. Oxford University Press. Required.

(BS) Salanié, Bernard. *The Economics of Contracts*, 2nd edition. Recommended.

The MP text is more detailed than the BS text, and the lectures will follow it more often than BS. Either edition of MP is fine, as they are virtually identical. (the 1st ed. is cheaper.)
Supplementary.

JR is graduate microeconomic theory textbook that has some material on contract theory. BD is a graduate contract theory textbook.

(JR) Jehle and Reny, *Advanced Microeconomic Theory*, 3rd edition. Chapters 8-9.

(BD) Bolton and Dewatripont, *Contract Theory.*

Important Dates

TBA

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[2]The definition of an excused absence, departmental regrade policies, and so on can be found at https://economics.sas.upenn.edu/undergraduate/course-information/course-policies.

Tentative Outline of Topics

1. Contracts in Symmetric Information Settings

2. Moral Hazard

    Edgeworth Box Example

    The More General Case

    Multi-Tasks

    Applications

        Ownership

        Insurance

        Wage Determination

3. Adverse Selection

    Mechanism Design Overview

    Two-Type Price Discrimination

    Continuous-Type Price Discrimination

    Applications

        Regulating a Firm

        Monopoly Insurance

        Auction Design