



Department of Economics

ECON 498.3 (01)

CONTRACT THEORY

T2: 2009/10

Course Details

Venue: Geol 265: TR 14:30-15:50

This course is taught together with Econ 898.3.

Course Objective: Contract theory is the field of economics concerns itself with finding and understanding mechanisms that allow for mutually beneficial trade in situations of information asymmetry. Contract theory addresses a large number of practically important questions, such as: What types of contracts do insurers offer to their clients? Who can get insurance? What salary patterns and career paths should firms offer their employees? What auction mechanism yields the highest return? Who should own a firm?

This course introduces the central concepts and methods used in contract theory. It presents a number of classic results, and equips students with the analytical tools to find efficient solutions for problems under asymmetric information.

Prerequisites: Econ204, Econ211 (or Econ213), and Econ306
or other courses that provide a similar background in microeconomics and calculus, and some basics in statistics

Instructor

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Office Hours: Tuesday, 11:00-12:00 and Thursday, 4:00-4:30

Course Description and Grading

During this term, you will write two exams and work on a number of assignments. You may also give a presentation, if you want to. There are four components to your grade:

Description	Date/deadline	Weight	Weight (Econ898)
Assignments	TBA	20%	-
Midterm Exam	February 11	20%	25%
Presentation	TBA	(not required)	-
Participation		5%	5%
Final Exam	TBA	55%	70%

If you do not write the midterm or if you get a higher grade on the final than on the midterm, the weight of the midterm will be shifted to the final exam.

- Exams:** Exams will be cumulative and test your understanding of the subject material and your ability to analyze and formulate solutions to specific problems. The assignments are intended to assist you in the preparation for the exams. In the final exam, you will be able to exclude one topic of your choice we have covered. All exams are closed book. Note that no electronic devices will be permitted during examinations, with the exception of approved calculators without programming or communication functions.
- Assignments:** A number of problem sets will be distributed during the term. Each of them will consist of a number of questions, and each question has a weight assigned to it (typically 3% to 6%). You should submit solutions to questions worth at least 20% during the term. The quality of your answers will count towards your final grade. If you submit solutions worth more than 20% in total, only the best 20% will be counted. The problem sets will be discussed in class.
- Presentation:** Students at the 800-level are required to give a 20-minute presentation. You may do so voluntarily.
- 498 vs. 898:** For your information, these are the most important differences between the 400 and 800-level versions of this course:
- Students taking the course at the 800-level do get credit for solving assignment questions.
 - The weights of the exams in the final grade are different (see table above).
 - 800-level students have to do a presentation.
 - The reading list for 800-level students includes classic articles in the field.
 - The exams are different, and 400-level students will be able to exclude a topic of their choice from the final exam.

Textbooks

Required Textbook:

Patrick Bolton and Mathias Dewatripont: *Contract Theory*, MIT Press, Cambridge (MA) and London, 2005. [referred to as **BD**]

Other references:

Chiappori, P.-A. and B. Salanié (2003), “Testing Contract Theory: a Survey of Some Recent Work” in *Advances in Economics and Econometrics*, vol 1, M. Dewatripont, L. Hansen and S. Turnovsky (eds.), Cambridge University Press.

Fudenberg, and J. Tirole, (1992), *Game Theory*, MIT Press.

Hart, O. (1995), *Firms, Contracts and Financial Structures*, Clarendon Press (chap. 1-4).

Laffont, J.J. and D. Martimort (2002), *The Theory of Incentives: The Principal-Agent Model*, Princeton University Press.

Salanié, B. (1997), *Contract Theory: A Primer*, MIT Press

Tentative Course Outline and Readings

1. Introduction
BD, Chapter 1
2. Moral Hazard
BD, Chapters 4 and 6
Holmstrom, B. (1979). "Moral Hazard and Observability." *Bell Journal of Economics*: 10:74-91.
Holmstrom, B. and P. Milgrom (1990), "Multi-Task Principal-Agent Analyses," *Journal of Law, Economics and Organization*, 7, Special Issue.
Mirrlees, J. (1999), "The Theory of Moral Hazard and Unobservable Behavior", *Review of Economic Studies* 66: 3-21.
3. Adverse Selection: Signalling and Screening
BD, Chapters 2 and 3
Adams, W. and J. Yellen (1976), "Commodity bundling and the burden of monopoly," *Quarterly Journal of Economics* 90: 475-498.
Baron, D. and R. Myerson (1982), "Regulating a Monopolist with Unknown Costs," *Econometrica*, 50(4): 911-30.
Laffont, J-J and J. Tirole (1986), "Using Cost Observation to Regulate Firms," *Journal of Political Economy*, 94(3).
Maskin, E. and J. Riley (1984), "Monopoly with Incomplete Information," *Rand Journal of Economics*, 15: 171-96.
Mirrlees, J. (1971), "An exploration in the theory of optimum income taxation," *Review of Economic Studies* 38: 175-208.
4. Multilateral Contracting: Auctions and Mechanism Design
BD, Chapter 7
Cremer, J. and R. McLean (1988), "Full Extraction of the Surplus in Bayesian and Dominant Strategy Auctions," *Econometrica* 56, 1247-1258.
d'Aspremont, C. and L. Gerard-Varet (1979), "Incentives and Incomplete Information," *Journal of Public Economics*, 11: 24-45.
Maskin, E. and J. Riley (1984), "Optimal Auctions with Risk-Averse Buyers," *Econometrica* 52(6): 1473-1518.
Milgrom, P. and R. Weber (1982), "A Theory of Auctions and Competitive Bidding," *Econometrica* 50(5):1089-1122.
Myerson, R. (1981), "Optimal Auction Design," *Mathematics of Operations Research*, 6: 58-73.
Myerson, R. and M. Satterthwaite (1983), "Efficient Mechanisms for Bilateral Trading," *Journal of Economic Theory*, 29: 265-281.
5. Dynamic Adverse Selection: Renegotiation
BD, Chapter 9

- Dewatripont, M. (1989), "Renegotiation and Information Revelation over Time: The Case of Optimal Labor Contracts," *Quarterly Journal of Economics*, 104: 589-619.
- Diamond, D. (1989), "Reputation Acquisition in Debt Markets," *Journal of Political Economy*, 97(4), 828-62.
- Hart, O. and J. Tirole (1988), "Contract Renegotiation and Coasian Dynamics," *Review of Economic Studies*, 55: 509-540.
- Laffont, J.-J. and J. Tirole (1988), "The Dynamics of Incentive Contracts," *Econometrica*, 56(5): 1153-1175.
- Townsend, R. (1982), "Optimal Multiperiod Contracts and the Gain from Enduring Relationships under Private Information," *Journal of Political Economy*, 90, 1166-86.

6. Incomplete Contracts and Institution Design

BD, Chapter 11

- Aghion, P., M. Dewatripont and P. Rey (2002), "On Partial Contracting," *European Economic Review*.
- Che, Y. and D. Hausch. (1999). "Cooperative Investments and the Value of Contracting." *American Economic Review* 89: 125-47.
- Grossman, S. and O. Hart (1986), "The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration," *Journal of Political Economy*, 94(4): 691-719.
- Hart, O. (1995). *Firms, Contracts, and Financial Structure*. Oxford University Press.
- Hart, O. and J. Moore (1990), "Property Rights and the Nature of the Firm," *Journal of Political Economy*, 98 (6): 1119-1158.
- Hart, O. and J. Moore (1999), "Foundations of Incomplete contracts," *Review of Economic Studies*, 66(1): 115-38.
- Maskin, E. and J. Tirole (1999), "Unforeseen Contingencies and Incomplete Contracts," *Review of Economic Studies*.
- Tirole, J. (1999), "Incomplete Contracts: Where Do We Stand?" *Econometrica*, 67(4): 741-81

Required readings are printed in **bold** font.

Academic Integrity

This course will conform to the academic requirements and standards for graduate courses, including the rules of *Student Appeals in Academic Matters* (see http://www.usask.ca/university_council/reports/12-06-99.shtml) and Academic Honesty (see <http://www.usask.ca/honesty/>).

Attachment

"Writing it Right," also available at http://www.usask.ca/university_secretary/pdf/dishonesty_info_sheet.pdf