The application of game theory—and an alternative strategic theory called “theory of moves”—as well as social-choice theory to a wide variety of strategic situations, principally but not exclusively in politics, will be examined. Uses of strategy in voting in committees and elections, in political campaigns, in the defense and deterrence policies of nations, and in bargaining and coalition-building situations will be among the topics discussed. Secrecy and deception as political strategies will also be analyzed.

Although the applications of strategic thinking will be mainly to American and international politics, strategy in everything from the Bible to sports and business today will be studied, too. Social-choice topics that will be analyzed include the manipulability of different voting systems, problems of achieving proportional representation in parliamentary democracies, and conflicts among different apportionment methods. Fair-division procedures for resolving disputes will also be analyzed.

In addition to the required readings, further readings will be recommended throughout the course for those interested in pursuing particular topics in greater depth. No mathematical training beyond high school mathematics is assumed in the course. The written requirements of the course include a midterm and a final examination plus a short paper on a topic—to which game theory is applicable—that is chosen in consultation with the instructor. Each of the three written requirements will count approximately 1/3 towards one’s final grade.

Required Books


Brams, Steven J.  THEORY OF MOVES. Cambridge, UK: Cambridge University Press, 1994. TOM


Assignments Due

Sept. 9: **RP**, chs. 1-2; **TOM**, Introduction and ch. 1; **AS**, Introduction and chs. 1-3
Sept. 16: **TOM**, chs. 2; **AS**, chs. 4-5
Sept. 23: **TOM**, chs. 3-4; **AS**, chs. 6-7
Sept. 30: **TOM**, ch. 5-6; **AS**, ch. 8
Oct. 7: **TOM**, chs. 7-8 and Review
Oct. 21: Midterm Examination
Oct. 28: **RP**, ch. 3; **AS**, chs. 9-10
Nov. 4: **RP**, ch. 4; **AS**, chs. 11-12
Nov. 11: **RP**, chs. 5 & 7 (skip ch. 6)
Nov. 18: **RP**, chs. 8-9; **AS**, chs. 13-14
Nov. 25: 8-10 page paper due; oral reports
Dec. 2: **WW**, entire book
Dec. 9: Review
Dec. 16 (?): Final Examination

Game Theory Texts


Harrington, Joseph E., Jr. GAMES, STRATEGIES, AND DECISION MAKING. Worth, 2008.


Luce, R. Duncan, and Howard Raiffa. GAMES AND DECISIONS: A CRITICAL SURVEY. Wiley, 1957.


Straffin, Philip D. GAME THEORY AND STRATEGY. Mathematical Association of America, 1993.


Williams, Kenneth C. INTRODUCTION TO GAME THEORY: A BEHAVIORAL APPROACH. Oxford University Press.


Applications and History of Game Theory and Social-Choice Theory


Ankeny, Nesmith C. POKER STRATEGY: WINNING WITH GAME THEORY. Basic, 1981.


Brams, Steven J. PARADOXES IN POLITICS: AN INTRODUCTION TO THE NONOBVIOUS INpolitical SCIENCE. Free Press, 1976.


Moulin, Hervé J. FAIR DIVISION AND COLLECTIVE WELFARE. MIT Press, 2003


Vajda, Steven.  MATHEMATICAL GAMES AND HOW TO PLAY THEM.  Ellis Horwood, 1992.


Wydick, Bruce.  GAMES IN ECONOMIC DEVELOPMENT.  Cambridge University Press, 2008.
