Game Theory Review: Topics Covered

Final exam currently scheduled for 9-11am on Wednesday May 18.

Dominant strategies Strictly and weakly dominant strategies; strictly and weakly dominated strategies.

Nash equilibrium of strategic games Describing strategies and Nash equilibrium fully; underlining and/or strike-out methods of finding Nash equilibrium; strict Nash equilibrium.

Best response functions How to construct them; relationship to Nash equilibrium.

Oligopoly models Cournot (quantity competition), Bertrand (price competition), Stackelberg (leader-follower).

Auctions Different kinds of auctions, strategies, and Nash equilibriums.

Mixed strategy Nash equilibrium How to find them.

Extensive move games Game trees and backward induction.

Subgame perfect Nash equilibrium Describing them *fully* (i.e., describing what the players will do everywhere in the game treee), understanding connection to backward induction.

Finitely repeated games Solving using backward induction/SPNE.

Infinitely repeated games Describing trigger strategies fully, finding critical values of δ that support cooperation.

Evolutionary game theory Definition of evolutionary stability, pure and mixed strategy evolutionarily stable strategies. *No asymmetric contests.*