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 tree), understanding connection to backward induction.

**Finitely repeated games** Solving using backward induction/SPNE.

**Infinitely repeated games** Describing trigger strategies fully, finding critical values of $\delta$ that support cooperation.

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