Game theory is concerned with modeling and analysis of strategic decision-making in situations where there is interdependence between the participants. This course studies applications of game theory to managerial problems. Topics include basic concepts for games with various structures; prisoners’ dilemma; strategic moves; credible commitments; mixed strategies; bargaining; auctions; competition; cooperation; voting; incentives; and brinkmanship. Examples and case studies in a variety of contexts are used to illustrate game-theoretic concepts and approaches.

Students will undertake a project on a topic related to the subject of the course. Classes will in part cover a formal introduction to game theory as in the preceding paragraph and will in part focus on student projects and related topics. Satisfactory completion of the course will require adequate attendance, preparation, and participation in connection with the formal game-theoretic material. Subject to satisfactorily doing this, each student’s grade for the course will be based entirely the student’s project (including presentations and intermediary products as well as the final paper).

Texts:

Assignment for the first class:
Read chapters 1, 2, 3, and 7 of Dixit/Nalebuff and chapters 1, 2, 3, 4, and 14 of McMillan.