Course Code: ECO 730 - Advanced Game Theory - 3 credit hours

1. **Objectives**

   a. To apply game-theoretic analysis, both formally and intuitively, to economic models and real world situations

   b. Recognize and assess archetypal strategic situations in complicated negotiation settings

   c. To illustrate the importance of competitive and cooperative factors in a variety of decision problems

Outcomes

2. Upon successful completion of the requirements for this course, students will be able to understand selected models and concepts of game theory, understand articles that use intermediate and applied game theory, produce simple economic models with basic game theory.

3. **Contents with suggested contact hours**

   a. Static Games of Complete Information
      (1) Basic Theory
      (2) Applications (Oligopoly models)
      (3) Advanced Theory: Mixed Strategies

   b. Dynamic Games of Complete Information
      (1) Games of perfect information
      (2) Two-Stage Games of Complete but Imperfect information

   c. Repeated Games

   d. Dynamic Games of Complete but Imperfect information

   e. Static Games of Incomplete Information

   f. Dynamic Games of Incomplete Information

   Three contact hours are suggested.

Details of lab work, workshops practice:

4. Not Applicable

5. Recommended Reading:

   a. Gibbons, *Game Theory for Applied Economists,* Princeton University Press.

b. Christian Montet and Daniel Serra, *Game Theory and Economics*, Palgrave Macmillan.
c. Fudenberg, D. and Tirole, J.(1991). Game Theory. MIT Press
d. Krishna V. (2002). Auction theory. Academic Press
e. Osborne, M. J., and Rubinstein, A. (1994). A course in Game Theory. The MIT Press.
f. Myerson, Roger (1997). Game Theory. Analysis of conflict. Harvard Press.
g. Camerer, C (2001). Behavioral Game theory. Experiments in Strategic Interaction. Princeton University Press.
h. Mailath, G. J., and L. Samuelson (2006): Repeated Games and Reputations: Long-Run Relationships. Oxford University Press, New York, NY.