

## Economics 9471: Advanced Game Theory Fall 2009

**Instructor:** Oksana Loginova, 333 Professional Bldg, (573)882-4229, loginovao@missouri.edu

**Office Hours:** Tuesday/Thursday 11am-12pm and 2-3pm, or by appointment

**Class Time and Location:** Tuesday/Thursday 3:30-4:45pm, 305 Middlebush

**Course Description:** This course presents core concepts in game theory and illustrates their uses with a range of economic applications. It will be assumed that you know microeconomic theory as covered in Econ 8451.

**Recommended Textbooks:** Mas-Colell, Whinston & Green, *Microeconomic Theory*; Robert Gibbons, *Game Theory for Applied Economists*; Drew Fudenberg & Jean Tirole, *Game Theory*.

**Course Requirements and Grading:** There will be a number of homework assignments, a mid-term exam (October 8) and a final exam (Thursday, December 17, 10:30am-12:30pm). Both exams are of the problem-solving type. Your grades will depend on your performance on the homework assignments (20%), the midterm exam (35%) and the final exam (45%).

**Make-Up Exams:** Make-up exams will generally not be given. A request for alternative arrangements must be in writing and must be accompanied by appropriate documentation for not taking the scheduled exam.

**Academic Honesty:** The MU policy on academic honesty will be strictly implemented. Any academic dishonest action will be reported to the university.

**Disabilities:** If you have special needs as addressed by the Americans with Disabilities Act and need assistance, please notify the Office of Disability Services, A048 Brady Commons, (573)882-4696. Reasonable efforts will be made to accommodate your special needs.

### Major Topics:

1. Static Games of Complete Information
  - Nash equilibrium
  - normal-form games
  - static oligopoly games
2. Dynamic Games of Complete Information
  - subgame perfect NE
  - repeated games
  - bargaining models
  - agency and moral hazard
3. Static Games of Incomplete Information
  - Bayesian Nash equilibrium
  - mechanism design and monopolistic screening
  - auction theory
  - adverse selection in competitive markets
4. Dynamic Games of Incomplete Information
  - perfect Bayesian equilibrium
  - signaling