Course Description:
This class will cover a wide range of issues in microeconomic theory dealing with the theory of information and incentives. This will include an introduction into the theory of mechanism design which is concerned with how to design mechanisms to elicit optimal outcomes in a variety of market and social choice contexts. The course will begin with an overview of some of the basic concepts from game theory as a means of modeling strategic situations and strategic choice. The next section of the course will deal with classic issues in information economics including moral hazard and adverse selection. The next three sections will deal with the main areas of the mechanism design literature such as the principal agent problem dealing with contract design issues, the design of optimal auctions and other market institutions and then we will look at social choice issues or the design of optimal voting institutions. In the last few weeks of the course we will look at some applications of this theory to the design of real mechanisms.

Course Texts:

All required readings will be from Fudenberg and Tirole, Mas-Colell, Whinston and Green or journal articles. The other books listed may be helpful for certain parts of the course and the syllabus will refer to specific sections of some of them that cover the relevant material. Students are encouraged to seek out those books they find most helpful.


Grading:
One midterm exam (35%), Final exam (45%), Homework (20%).
**Course Outline:** A * indicates that the reading is required. A • indicates that it is suggested.

1. Introduction to Game Theoretic Concepts and Modeling
   * FT 1-5
   • JR Chapter 7
   • MWG Chapters 7, 8 and 9

2. Theory of Imperfect Information
   i. Adverse Selection
      * MWG 436-450
      • Wolfstetter p. 243-248
   ii. Signaling
      * FT Chapter 8 and Section 11.2
      • MWG 450-459
      • Gibbons Chapter 4, Wolfstetter Chapter 10
   iii. Screening:
      * MWG 460-467
      • Wolfstetter p.252-266
   iv. Principal agent problems / Moral Hazard:
      * MWG 477-501
      • Wolfstetter Chapter 11

3. Auction Theory
   • Wolfstetter Chapter 8, Gibbons 155-158
4. Formal Mechanism Design
   - FT Chapter 7
   - MWG Chapter 23

5. Voting Models and Social Choice Theory
   - MWG Chapter 21

6. An Introduction to Applied Mechanism Design
   i. General Evaluation of Mechanisms
   ii. Design of Multiple Unit Auctions – Application to Spectrum Auctions


iii. Design of Resource Allocation Mechanisms – Application to Space Station


iv. Mechanisms for Information Aggregation


**HONOR CODE:** Academic dishonesty as it relates to tests in this course will not be tolerated in any form. The Academic Honor system of the Florida State University is based on the premise that each student has the responsibility to:

1. Uphold the highest standards of academic integrity in the student's own work;
2. Refuse to tolerate violations of academic integrity;
3. Foster a high sense of integrity and social responsibility.

Put simply, cheating will not be tolerated. If an instance of academic dishonesty takes place, all students involved will receive a zero for that exam and the grade may not be dropped.

**AMERICAN DISABILITIES ACT STATEMENT:** Students with disabilities needing academic accommodations should:

1. Register with and provide documentation to the Student Disability Resource Center (SDRC);
2. Bring a letter to the instructor from SDRC indicating that you need academic accommodations. This should be done within the first week of class.