

**Economics 321-Applied Game Theory  
Rutgers University-Camden  
Fall 2018 Syllabus**

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Prof. John Smith  
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Phone: (856) 225-6319  
Office Hours: Mondays 4:30-5:30 PM, Tuesdays 11:30 AM-12:30 PM, or by appointment.<sup>1</sup>  
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Time: Mondays 6:00-8:50 PM  
Location: 207 Armitage  
Website: <https://sakai.rutgers.edu/portal/site/334d94a2-532e-48b6-a111-eb5f343dd4d0>  
(or follow the link from <http://crab.rutgers.edu/~smithj> )

Textbook: Games of Strategy by Avinash Dixit, David Reiley and Susan Skeath, 3<sup>rd</sup> edition.

This class is designed to improve your understanding of the strategic situations ranging from what you face every day to the strategic interaction between nations.

Prerequisites: High School Algebra. It is not assumed that you have taken Economics 361.

How is this class related to Economics 361? Economics 361 focuses on the theory of games. This class focuses on the interpretation and application of the theory. Neither is a prerequisite for the other.

Academic integrity violations are serious matters and will be handled in accordance with Rutgers University Policy. For more information, visit <https://academicintegrity.rutgers.edu>.

Students with disabilities should contact the Rutgers-Camden Office of Disability Services (ODS). For more information, visit <http://learn.camden.rutgers.edu/disability-services>. Accommodations will be made in accordance with Rutgers University Policy.

I only accept email attachments in pdf format.

Lecture notes will be posted on the course website after every class meeting.

Review sessions will be given in class before every exam.

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<sup>1</sup> I will be in my office most days. Just send me an email to make sure.

<sup>2</sup> While I will respond as soon as possible, do not expect an instant response.

Participation in an experiment will account for 5% of your grade.

The class participation portion of the grade will be determined by classroom behavior. Constructive comments or questions will lead to a higher grade. Distractions, such as taking during class or use of any electronic device during class, will lead to a lower grade.

**Grading:**

Problem Sets: 10%

Participation in experiment: 5%

Class participation: 5%

Maximum of the following:

\*Midterms Best 2 of 3: 30%

\*All 25 Quizzes: 20%

\*Final: 30%

or

\*All Three Midterms: 40%

\*All 25 Quizzes: 20%

\*Final: 20%

or

\*Midterms Best 2 of 3: 30%

\*Quizzes: Best 20 of 25: 15%

\*Final: 35%

or

\*All Three Midterms: 40%

\*Quizzes: Best 20 of 25: 15%

\*Final: 25%

There are no makeup midterms for any reason. If you miss a midterm then this will count as your lowest exam. Midterms will be given in class on **October 1, October 22, and November 19**

The Final Exam is on **December 10, during class.**

Twenty-five in-class quizzes will be given. These quizzes will be given at the beginning, the middle, or the end of class. There are no makeup quizzes for any reason, including arriving late or leaving early. If you miss a quiz then you will receive a score of zero. However, up to 5 quizzes may not count towards your grade. Quizzes are designed to test basic comprehension and will only take a few minutes. Notes taken during class can be used during the quiz.

Exams require the use of a pencil. It is the responsibility of the student to bring their own pencil to exams. Quizzes require the use of a pencil or a pen. It is the responsibility of the student to bring their own pencil or pen to every class.

## **Schedule**

### **September 10** (Quizzes 1 and 2)

Lecture 1

Chapter 1: Basic Ideas and Examples

Lecture 2

Chapter 2: How to Think About Strategic Games

### **September 17** (Quizzes 3, 4, and 5)

Lecture 3

Chapter 3: Games with Sequential Moves

Lecture 4

Chapter 4: Simultaneous-Move Games with Pure Strategies I: Discrete Strategies

### **September 24** (Quizzes 6, 7, and 8)

Lectures 5 and 6

Chapter 4: Simultaneous-Move Games with Pure Strategies I: Discrete Strategies

Chapter 5: Simultaneous-Move Games with Pure Strategies II: Continuous Strategies and III: Discussion and Evidence

### **October 1**

#### **First Midterm Review**

#### **First Midterm**

### **October 8** (Quizzes 9 and 10)

Lecture 7

Chapter 6: Combining Sequential and Simultaneous Moves

Lecture 8

Chapter 7: Simultaneous-Move Games with Mixed Strategies I: Two-by-Two Games

### **October 15** (Quizzes 11, 12, and 13)

Lecture 9

Chapter 7: Simultaneous-Move Games with Mixed Strategies I: Two-by-Two Games

Lecture 10

Chapter 8: Simultaneous-Move Games with Mixed Strategies II: Some General Theory

### **October 22**

#### **Second Midterm Review**

#### **Second Midterm**

### **October 29** (Quizzes 14 and 15)

Lecture 11

Chapter 9: Uncertainty and Information

Lecture 12

Chapter 9: Uncertainty and Information

**November 5** (Quizzes 16, 17, and 18)  
Lectures 13 and 14  
Chapter 10: Strategic Moves

**November 12** (Quizzes 19, 20 and 21)  
Lectures 15 and 16  
Chapter 11: Prisoner's Dilemma and Repeated Games

**November 19**  
**Third Midterm Review**  
**Third Midterm**

**November 26** (Quizzes 22 and 23)  
Lecture 17  
Chapter 12: Collective-Action Games  
Lecture 18  
Chapter 13: Evolutionary Games

**December 3** (Quizzes 24 and 25)  
Lecture 19  
Chapter 17: Bidding Strategy and Auction Design  
**Final Exam Review**

**December 10**  
**Final Exam**