Econ 40050
Game Theory
Professor Thomas A. Gresik

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Office Hours: Mondays 11:00 am - noon, Tuesdays 2:30 pm – 4:00 pm, and by appointment
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Course Web Page
The course web page can be found at www.nd.edu/~tgresik/Econ40050/gametheory.htm. If you ever forget this link, you can always find it by starting from my home page: www.nd.edu/~tgresik. This page will include up-to-date schedule information and numerous course materials. I encourage students to check this page the day before each class especially for schedule information.

Course Description
Game theory is the formal study of strategic behavior. Strategic issues arise in any decision problem when each person's outcome is affected by the choices of others. Game theory has been used to understand behavior in economics, engineering, law, political science, psychology, business, biology, and sociology. This course will cover the basic concepts and analytic methods of game theory applicable to all disciplines and then develop a variety of important economic applications including oligopoly competition, international trade policy, patent races, contracting, and auctions.

Required Textbook
Strategies and Games: Theory and Practice by Prajit Dutta, MIT Press. The primary source of information will be material presented in class. Reading the text material is a complement to class activities and not a substitute.

Course Objectives
The primary objectives of this course are to
1. Learn the basic terminology and solution concepts of game theory,
2. Demonstrate facility with the solution concepts by solving a variety of strategic problems, and
3. Be able to explain the fundamental economic trade-offs in strategic problems.

Grades
Your semester grade will be based on homework, 2 midterms, and a final exam. Homework will count for 20%, each midterm will count for 25%, and the final exam will count for 30%. Throughout the semester there will be opportunities for class participation including some competitive exercises. Active participation in classes and exercises can increase your semester average by up to 5 percentage points (one-half of a grade level).

Attendance Policy
I do not require attendance but strongly encourage you to attend every class. You may miss up to 2 classes before your class participation bonus is affected. You will not incur a penalty for excused absences, but they will count towards the total number of classes missed until any missed assignments are completed.

Students who start to make a habit of arriving at class late will be given a warning after which each late arrival will count as an absence. Late arrivals disrupt class and should be avoided. Please see me if you have a conflict that makes it difficult to arrive on time.
Excused absences. I follow the University policy on absences. University-excused absences are limited to your own illness, death in the family, or for duties performed for the university. If an illness prevents you from attending class, you must provide a note from University Health Services or from your rector. If your illness is serious enough to miss class, it is serious enough to see UHS or inform your rector.

Interviews do not constitute a reason for an excused absence but I am happy to work with any student who has an interview that conflicts with an assignment or exam as long as you check with me before you agree to a specific interview time. Class assignments may always be turned in early.

If you miss an exam due to an excused absence, please contact me to make arrangements to complete the exam. If you miss any other type of assignment due to an excused absence, you will either have the opportunity to complete the assignment at another time or I will make an appropriate adjustment at the end of the semester to reflect your excused absence.

Most university duties are scheduled well in advance. You are responsible for making arrangements with me to make up work missed due to a university duty at least one week in advance. For last minute duties that arise, please contact me as soon as you learn of a conflict.

Exam Information

Exams: Both midterms will be administered during regular class time. The final exam will be cumulative. All three exams will test your knowledge and understanding of basic terms and concepts as well as your ability to apply the concepts to solve economic problems. Midterm and final exam dates will be posted on the course web page.

Please notify me of any exam conflicts or special testing needs as soon as possible. Conflict or special requests made less than one week before an exam will be denied unless the delay is outside of your control.

All exams are closed-note and closed-book. The only permissible materials you may bring to an exam are a pen or pencil, a ruler to help draw graphs, and a hand-held, nonprogrammable, non-graphing calculator. Cell phones, laptops, PDAs or any other type of computing or communication equipment may not be used for any reason during an exam.

Missed or Late Assignments

All assignments are due at the beginning of class on the assigned dates unless other instructions are given. Late assignments that are not the direct result of an excused absence will receive a penalty up to zero credit unless you have made prior arrangements with me. If you come to class after an assignment has been collected, your assignment will be considered late. Assignments must also be neatly prepared and stapled. Unstapled assignments will be considered late.

Honor Code Rules

Exams. All exams and quizzes will be closed-note and closed-book. You may have a pen or pencil, a ruler, and a nonprogrammable, non-graphing, hand-held calculator with no communication capabilities at your desk while taking an exam. PDAs and cell phones or any other type of computing or communication equipment are prohibited. Any other forms of assistance or sources of information are prohibited. This includes the sharing of information about the exam with someone who may not yet have taken a test or eliciting information from students who have already taken a test.

Homework. You may discuss these assignments with other members of the class. However, you must write up your own assignment. Copying another student's assignment is not permitted nor is
giving someone your assignment to copy.

Any violations of academic integrity will be handled in accordance the university's Academic Code of Honor.

**Topic Syllabus**

A detailed topic syllabus is available on the course web page.