

Economic Analysis of Strategy

ECO 560 – Fall 2007 – Tuesday 6:00-8:50pm

Instructor: Mark W. Frank, Ph.D.
Office: Smith-Hutson Business Building, Room 237-K
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Online: Grades and other material will be placed on Blackboard
Office Hours: Tuesday & Thursdays, 2 to 3:30 pm (walk-ins at other times are welcome).

Required Books:

- Games of Strategy Second Edition (2004) by Avinash Dixit and Susan Skeath
- A Beautiful Mind (1998) by Sylvia Nasar

Description: This course offers a study of game theoretical tools and their application to important real-world economic phenomena. Topics include: the organization of industry, labor and work-place economics, international trade policies, government and voting strategies, the role of legal institutions in the economy, and bargaining and bidding strategies.

Objectives: The primary objective of the course is to apply game theoretical tools and strategy to real-world economic phenomenon. Upon completion of the course, students should expect to have an understanding and appreciation of:

1. Equilibrium in static (single-move) and dynamic games,
2. Equilibrium in simultaneous and sequential games,
3. Equilibrium in games with complete and incomplete information,
4. The nature of optimal strategies; including Pure strategies, Nash strategies, Maximin strategies, and Mixed strategies,
5. The usefulness of game theory analyzing in a variety of real-world business and political situations.

Evaluation: Grades will be based on problem sets (many of which will include an in-class portion), class ranking in an online competitive strategy game, and three examinations. The first two exams will consist of multiple choice, short answer, and fill-in-the-blank questions. The final exam is take-home and comprehensive. Each of the exams will be worth 20% of the final grade. Your average from all the problem sets will be worth 25% of the final grade. The online

competitive strategy game will be worth the remaining 15% of the final grade. Letter grades will be assigned in the following manner:

Above 90.0% = A, 80.0% to 89.9% = B, 70.0% to 79.9% = C, Below 69.9% = F .

Attendance Policy: Regular and punctual class attendance is expected; many of the homework assignments will have in-class components that cannot be made up if class is missed. All late homework assignments are assessed a penalty of 5 points per day.

Student Absences on Religious Holy Days Policy: Section 51.911(b) of the Texas Education Code requires that an institution of higher education excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence.

University policy 861001 provides the procedures to be followed by the student and instructor. A student desiring to absent himself/herself from a scheduled class in order to observe (a) religious holy day(s) shall present to each instructor involved a written statement concerning the religious holy day(s). This request must be made in the first fifteen days of the semester or the first seven days of a summer session in which the absence(s) will occur. The instructor will complete a form notifying the student of a reasonable timeframe in which the missed assignments and/or examinations are to be completed.

Disabled Student Policy: It is the policy of Sam Houston State University that no otherwise qualified disabled individual shall, solely by reason of his/her handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any academic or Student Life program or activity. Disabled students may request help with academically related problems stemming from individual disabilities from their instructors, school/department chair, or by contacting the Chair of the Committee for Continuing Assistance for Disabled Students and Director of the Counseling Center, Lee Drain Annex, or by calling (936) 294-1720.

Tentative Course Outline:

Class Days:	Topic:	Readings:
Aug 21, 28	Introduction & Sequential Move Games	Dixit & Skeath, ch.1 – ch.3 Nasar, Part 1 (prologue – ch.20)
Sept 4, 11, 18, 25	Simultaneous Move Games	Dixit & Skeath, ch.4 – ch.5 Nasar, Part 2 (ch.21 – ch.29)
October 2	Exam 1	
Oct 9, 16, 23	Mixed Strategies & Uncertainty	Dixit & Skeath, ch. 7 – ch.9 Nasar, Part 3 (ch.30 – ch.37)
Oct 30, Nov 6	Applications	Dixit & Skeath, TBA Nasar, Part 4 (ch.38 – ch.46)
November 13 (no class Nov 20)	Exam 2	
Nov 27, 4	Applications	Dixit & Skeath, TBA Nasar, Part 5 (ch.47 – epilogue)
Tuesday December 11th @ 8 pm	Exam 3	