

Dr. Carolyn Fabian Stumph

This is my fifth year at IPFW. I enjoy teaching and I hope that you learn a great deal in this course. This will be the fourth time I have taught this course—once at another university and twice here at IPFW.

My office hours are listed below, but I am usually around. Please feel free to stop by or contact me at any time.

Office Hours: Monday 11 to 1 pm or by appointment
Office: Neff Hall, 340F
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SYLLABUS

Game Theory Goes to the Movies

Economics 328, section 1
Indiana University/Purdue University Fort Wayne

Spring 2008

“Life must be understood backwards; but...it must be lived forward.”
Soren Kierkegaard

Course Description:

Would you like to have the edge in any competitive situation? Would you like to be able to change those situations so that you come out on top?

The study of game theory can help you get ahead in life and business. It will provide you with more purpose and direction. You will also have a heightened awareness of the strategic interactions occurring around you. We cannot help being involved in these situations, so let's be smart about it!

All of us engage in games of strategy throughout our lives. A variety of games are played by nations, businesses and people daily. As students, your approach to your schoolwork, dating and even dieting provides many opportunities to win at games. The popular movie clips used in this class will provide us with a wealth of examples to which we can all relate. This course will give you the tools you need to spot games when they occur and to alter the outcomes in your favor.

Game theory is the science of strategic thinking. It is a new science that has applications to such diverse fields as biology, computer sciences, anthropology and political science. Upon completion of this course, you will be able to demonstrate an understanding of

game theoretic principles by synthesizing illustrations from popular movies like “Troy”, “Indiana Jones and the Last Crusade” and “Ransom.” Movies like these provide illustrations of a wide variety of strategic interactions. We will analyze games in which the players seek cooperative outcomes, like dating, and games where the players’ interests are strictly opposed, like war.

This course will benefit students from any discipline and is intended for upper level students. To give us a common language for the discussion of business games and individuals’ preferences, Econ 201 is a prerequisite. We will meet T/Th from 1:30 to 2:45 pm and the class will conclude with a field trip to a newly released first run movie of our choice.

Economics 328 supports the Doermer School of Business learning objectives through the development of analytical skills for understanding strategic interaction between firms and other economic agents in the business community and beyond. The development of these skills prepares you for lifelong learning through the ability to apply abstract concepts.

Required Text:

McCain, Game Theory: A Non-Technical Introduction to the Analysis of Strategy, South-Western, 2004.

Grading Plan:

Your final grade will be determined as follows:

Three scheduled exams (200 each) (see course outline for dates)	600 points
Homework*	70 points
Classroom Games**	70 points
Final Paper	100 points
Presentation	<u>60 points</u>
Total possible points	900 points.

*Homework will be assigned and collected more or less weekly. The assignments will be graded on a ten point scale (see rubric/grading guidelines). Once you reach 70 points, YOU ARE DONE and are no longer required to turn in homework assignments. A homework assignment schedule will be distributed and posted on Thursday, January 17.

**You will each be given 500 game points (like \$\$) to start the semester. We will play games in class--these games may be played as individuals, small groups or the class may play as one player. You may win or lose points, depending on how well (or poorly) you play. The player with the most points at the end of the semester will receive the full 70 points for this portion of the grade and all other class members will be graded accordingly. A running total of these points will be maintained on Blackboard. Enthusiastic participation is expected.

More details and intermediate deadlines will be forthcoming with regard to the final paper.

Course policies:

There will be no late work accepted.

Tentative Course Schedule:

Date	Topic	Reading Assignment	Film(s)
January 15	Introduction to Game Theory		Primetime Live segment
January 17	Strategy and Games	Chapter 1	“Crimson Tide”
January 22 and 24	Game forms and social dilemmas	Chapters 2 and 3	“Outbreak” “Murder by Numbers”
January 29 and 31	Nash Equilibrium	Chapter 4	“Beautiful Mind”
February 5 and 7	Classical Game	Chapter 5	“Footloose”
February 12	Review for Exam #1	Exam #1 will cover chapters 1, 2, 3, 4 and 5	
February 14	EXAM #1		
February 19 and 21	Probability	Chapter 7	Deal or No Deal clip
February 26 and 28	Mixed strategies	Chapter 8	“Indiana Jones and the Last Crusade”
March 4 and 6	Sequential Games	Chapter 14	“The Princess Bride”
March 18	Review for Exam #2	Exam #2 will cover chapters 7, 8 and 14	
March 20	EXAM #2		
April 1	Field trip		
April 4	CLASS CANCELLED		
April 8 and 10	Imbedded Games	Chapter 15	“Troy” “Talladega Nights...”
April 15 and 17	Strategic moves	Readings from Dixit and Skeath text	“Henry V”

April 22	Repeated Play	Chapter 16	“The Usual Suspects”
April 24 and 29	Student presentations		
May 1	Review for Exam 3	Exam #3 will cover chapters 15, 16 and the D&S chapter	
May 8	EXAM #3	1 to 3 pm (scheduled per the registrar)	

DISABILITIES STATEMENT: If you have a disability and need assistance, special arrangements can be made to accommodate most needs. Contact the Director of Services for Students with Disabilities (Walb, room 113, telephone number 481-6658) as soon as possible to work out the details. Once the Director has provided you with a letter attesting to your needs for modification, bring the letter to me. For more information, please visit the web site for SSD at <http://www.ipfw.edu/ssd/>