Math 112 **Game Theory Syllabus** **Spring 2011**

Week	Date	Game	Topic	Homework
1	1/12	Subtraction Games	Game Trees	1.1
	14	Grundy's Game	$\mathcal{P}$ and $\mathcal{N}$ positions	1.2
2	17			MLK DAY
	19	Chessboard Games	More $\mathcal{P}$ and $\mathcal{N}$	1.3
	21			Quiz #1
3	24	Race Games	Adding Games	1.4
	26	Chomp	Base 2 Arithmetic	1.5
	28	Nim	Nimbers	1.6
	31			Quiz #2
4	2/2	Collection Nim	Values of Games	1.7
	4	Frogs	More Values	1.8
5	7	Kayles	Splitting Games	1.9
	9	Cows	Spatial Games	1.10
	11			Review
	14			Test #1
6	16	Spinners	Probability	2.1
	18	Birthday Problem	Multiplication	2.2
7	21	Yahtzee	Addition	2.3
	23			Quiz #3
8	25	Poker	Poker Probabilities	2.4
	28	Bingo	Bingo Probabilities	2.5
	3/2	Roulette	Roulette Probabilities	2.6
	4			Quiz #4
	7-11			SPRING BREAK
9	14	Rank	Expected Values	2.7
	16	Sit Down	Properties of Averages	2.8
	18	Hog	Dice Games	2.9
10	21			Review
	23			Test #2
11	25	Matrix Games	Domination	3.1
	28	More Matrix Games	Mixed Strategies	3.2
	30	Letters	Graphical Solution	3.3
	4/1			Quiz #5
12	4	Fingers	Oddment Solution	3.4
	6	Larger Games	More Game Graphs	3.5
	8	Colonel Blotto	Matrices of Expectations	3.6
	11			Quiz #6
13	13	High-Low	Other Applications	3.7
	15	Football	Repeated Matrix Games	3.8
14	18	Baseball	More Repeated Matrix Games	3.9
	20	Huge Matrix Games	Approximation	3.10
	22			GOOD FRIDAY
15	25			Review
	27			Test #3
	29			Review
	5/2 (2-4 pm)			Final Exam