Math 112 – Mathematical Game Theory

Professor: Erich Friedman Term: Fall 2016

About the course: We will meet MWF at 9:00 in Elizabeth 315. This course is an introduction to mathematical game theory. We will be studying three general types of games, and trying to answer the questions "Who wins?", "How do they win?", "What are the chances they win?", and "How much do they win?" Most days I will answer homework questions from the previous section for 10–15 minutes, play a game for 5–10 minutes, and discuss new material for about 30 minutes. You can find out what we will be doing each day in class by consulting the syllabus (blue sheet). Game Theory is a relatively new field of mathematics. The majority of the material we'll be learning was developed less than 75 years ago. I hope you enjoy learning it with me.

About me: My e-mail address is `efriedma@stetson.edu`. My web page can be found at `stetson.edu/~efriedma/`. My office is Elizabeth 214–2, and my office phone is 822–7552. My office hours this semester are: MWF 10:00–11:00 and W 12:00–1:00.

This means that I am always in my office during these times, and you can drop by without an appointment. If you cannot make my regularly scheduled hours, let me know and we can set up another time to talk. Please come by if you need help, or if you just want to chat. I do not use Blackboard. You will soon see that my lecture style is informal. I will be calling you by your first name (or a nickname if you prefer), so please call me Erich.

About you: You do not need much math background to appreciate this course. We will be adding and subtracting a lot, occasionally with fractions or decimals. We will use base two arithmetic, percentages, algebra, matrices, and probability, but I will review everything you need to know. You will need a calculator for part of the course, but not a sophisticated one. This material is not taught in most high schools, so you should come to class and pay attention. You should read the book. You should try the homework, and ask questions about the ones that you couldn't do. You should come see me (during my office hours, or make an appointment) if you are having trouble.

About the math department: I am usually available to answer your questions, either in my office or by e-mail. The math secretary has a list of paid tutors available at other times. There is also the math clinic that meets MTWR afternoons and evenings in our classroom. I can make suggestions on which tutors might be the most helpful for this particular course. Please seek help as soon as you fall behind.

About the honor code: Stetson has an honor code. You are not only expected to do your own work, but to tell me if another student is not. The punishment for cheating is an F in the course.

About cell phones: I hate them. If one goes off in class, for any reason, it's mine for the rest of the day.

About Quantitative Reasoning: In order to assure that Stetson University is meeting its goals in providing an excellent General Education, the College has established specific General Education Learning Outcomes for all courses meeting a particular area requirement in the General Education curriculum. To monitor how well students are meeting those outcomes, instructors of those courses regularly submit work to the committees assessing each outcome. While the outcomes of these assessments are primarily for our internal use in monitoring and enhancing our curriculum, we may occasionally report the results of these assessments in published research or academic conferences. All such reports will include aggregate (not individual) data and will not include information that could identify the student or the instructor. While the use of this information within the institution is part of normal educational practice, you may choose not to allow data derived from your own work to be used for published reports or presentations by signing an "opt out" form in the Registrars office.

About Accommodations: If you anticipate barriers related to the format or requirements of a course, you should meet with the course instructor to discuss ways to ensure full participation. If disability-related accommodations are necessary, you should register with the Academic Success Center (386-822-7127, `stetson.edu/asc`) and notify the course instructor of your eligibility for reasonable accommodations. You, the course instructor and the Academic Success Center will plan how best to coordinate accommodations.

About your grade:

- **The Homework** is to do every problem at the end of a section that I lecture on. The starred problems are a bit harder than the rest. The homework will not be collected, but I will answer homework questions in class as time permits. Since these problems will help prepare you for the tests, you should do them. Feel free to work together on the homework problems, but make sure you can do them by yourself by test time. Make sure you ask about homework problems that you can't do.

- **Quizzes and Tests** will be given on the 9 dates announced on the syllabus. Please check your schedule now to see that there are no conflicts. If you are going to miss a quiz or test, please arrange something with me beforehand. If you miss a quiz or test without telling me beforehand, you will lose 10% of your grade per day, no exceptions. On the quizzes and tests, you will be expected to show your work and explain your answers. Each quiz is worth 50 points, and each test is worth 100 points.

- **The Final Exam** is comprehensive and is worth 200 points. There are a total of 800 points. There is no extra credit available. The grading scale is the standard 90/80/70/60, with plusses and minuses for the top and bottom 2% of each range.