Meeting time: TTh 12:30–2:20 and arranged
Room: Briggs 223
Instructor: Ádám Galambos, Briggs 212, 832-6667, adam.galambos@lawrence.edu
Office hours: Mondays 2:00–3:00, Wednesdays 10:30–11:30 and by appointment.
Class homepage: On Moodle.
Prerequisites: Econ 300, and sufficient mathematical maturity.

Course description
What do tennis, legislation, business strategy and driving have in common? They all involve strategic situations: the consequences of participants’ actions depend on other participants’ actions as well. In fact, everything that involves other people is likely to be a strategic situation, at least sometimes. In this class we will learn about the logic of strategic situations. We will ask: How do people act when other people are involved? How can people promote their goals when other people are involved? The focus of this course will be theory and problem solving. Consequently, you are likely to enjoy the course only if you take pleasure in tackling challenging, mathematically-formulated problems.

Class format
We will meet at our regular class times on Tuesdays, and for the first half of regular class time on Thursdays. Because this is a problem-centered course, each week small groups of (3 or 4) students will meet with the instructor for about an hour each to present homework problems. These midweek meetings will happen on Wednesdays, and on Thursday during the second half of class. Your midweek meeting time will be posted on Moodle every Monday. In every meeting, you will be expected to present some problems, and to critique your fellow students’ presentations of other problems. These mid-week meetings will play a central role in the course, and working on each weekly problem set is likely to take 5-6 hours. Reading the assigned material will be important for tackling the problems, and you will be responsible for mastering some parts of the readings on your own. Overall, this course will require far more independent work than the typical Lawrence course.

Readings
The required books for the course are Playing for Real and Game Theory: A Very Short Introduction, both by Ken Binmore. You are expected to read the required sections each week with a high degree of independence. The readings (together with our classes) will prepare you to do the homework problems. There will be additional readings posted on
Moodle. These are not required unless I specifically indicate that they are, but they are likely to increase your enjoyment of the class.

**Homework problems and project**

Homework problems will be chosen from the large number of very well thought out problems in *Playing for Real*. Each week there will be some problems that you can (and should) work on with others, and one problem that you must do entirely on your own. In our meeting, I might ask you to do some problem(s) from those you worked out with others, and you may be asked to present the problem you did on your own. This presentation should be especially well-prepared. You should pay attention not only to how you solve the problem, but also how you will present it clearly and efficiently, using the whiteboard.

Your written up problem sets will be due 24 hours after your meeting with me. You are to write up your solutions entirely on your own, in a clear and concise way, incorporating the discussion in your weekly problem-set meeting. The bulk of your work for this course will be your preparation for these weekly meetings and writing up the problem solutions.

Towards the end of the term you will also do a small project. This will involve finding a real world problem that you are interested in, and modeling it using game theoretic tools. Your project proposal will be due on May 3rd, and should be a half-page description of the project together with references (1-inch margins, 12-point font, double-spaced). This proposal should clearly describe the situation you intend to model, and it should clearly outline your model. Your project write-up should be 3-5 pages long (1-inch margins, 12-point font, double-spaced; or preferably typeset in \LaTeX), and will be due at the beginning of the last class.

**Exams**

There will be a midterm exam on Tuesday, April 26th and a final exam at 11:30 a.m. on Tuesday, May 31.

**Grading**

The midterm and final exam will each be worth 15%, the paper topic proposal is worth 2%, your project write-up is worth 8%, your presentation and critique in weekly meetings is worth 40%, and your problem set write-ups are worth 20%. The total number of points earned in the course will determine each student’s final grade according to the following scale:

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<th>% Range</th>
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<tr>
<td>92%-100%</td>
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I reserve the right to revise this scale downwards by uniformly increasing the band for each grade.

**Honor Code**

As with all classes at Lawrence University, the Honor Code applies to all activities related to this class. Please reaffirm the Honor Code on all written work.

I hope you will enjoy the course, and please contact me with any questions or concerns.