Instructor: Edward Green, eug2@psu.edu  
Lectures: TuTh 8:00–9:15 in 413 Kern  
Office hours: By appointment, in 415 Kern

Course Description

The tentative plan is to cover the following list of specific topics and associated readings.

**Topic 1** *Introduction*

Pearce [24, section 1], Green et al. [21]

**Topic 2** *Recursively eliminating dominated strategies*

Green [20], Dufwenberg and Stegeman [17]

**Topic 3** *Rationalizability*

Brandenburger and Dekel [9],

**Topic 4** *Games of incomplete information; belief hierarchies; player types; universal type space*

Harsanyi [22], Heifetz and Samet [23],

**Topic 5** *Common knowledge and common certainty*

Aumann [1], Brandenburger and Dekel [10]

**Topic 6** *Epistemic foundations of rationalizability and of Nash equilibrium*

Aumann and Brandenburger [3], Tan and Werlang [27], Bernheim [8, example in section 2(b)],
**Topic 7** Conditional dominance, games in extensive form, forward and backward induction

Ben-Porath [7], Shimoji and Watson [26], Chen and Micali [12], Battigalli and Siniscalchi [5], Battigalli and Friedenberg [4]

**Topic 8** Incomplete information

Forges [18], Forges [19], Battigalli and Siniscalchi [6], Dekel et al. [15], Chen and Xiong [13], Dekel et al. [16]

**Topic 9** “Almost-common” knowledge, global games, risk dominance

Rubinstein [25], Carlsson and van Damme [11], Aumann [2], Weinstein and Yildiz [28], Chen et al. [14]

**Course Assignments and Grading**

The course grade will be based on several problem sets or in-class examinations, and on a student presentation. Preferably, a student will participate in a reading group that will begin to meet at mid semester, and the presentation will be made there. However, reading-group participation is optional, and a student may elect to make a presentation in class. For students in their first semester of the PSU doctoral program, especially, making an in-class presentation is likely to be best option. In-class presentations should be expositions of course readings or of closely related readings (cleared in advance with the instructor). Reading-group presentations may present research—including the student’s own research in progress—on a broad range of topics related to game theory and decision theory.

**Academic Integrity**

Students must observe the Economics Department and CLA policies regarding academic integrity, which also specifies the procedure to be followed when a student is charged with violating the policy. The relevant web pages for these policies are [http://www.econ.psu.edu/undergraduate/academic_integrity.htm](http://www.econ.psu.edu/undergraduate/academic_integrity.htm) and [http://laus.la.psu.edu/current-students/academics/academic-integrity/resources-for-students](http://laus.la.psu.edu/current-students/academics/academic-integrity/resources-for-students).

**Valid Excuses for Absence**

During the course, many possible situations may arise that would result in your inability to attend class, attend exams, or perform at a minimally acceptable level during an examination. Illness or injury, family emergencies, certain University-approved curricular and extra-curricular activities, and religious holidays can be legitimate reasons to miss class or to be excused from a scheduled examination.

The Economics Department policy regarding absence, including the student’s responsibility to document an excuse, is found at [http://www.econ.psu.edu/undergraduate/valid_excuses.html](http://www.econ.psu.edu/undergraduate/valid_excuses.html) [http://www.econ.psu.edu/undergraduate/#valid](http://www.econ.psu.edu/undergraduate/#valid).

**Disability Access**

The Pennsylvania State University encourages qualified people with disabilities to participate in its programs and activities and is committed to the policy that all people shall have equal access to programs, facilities, and admissions without regard to personal characteristics not related to ability, performance, or qualifications as determined by University policy or by state or federal authorities. If anticipate needing any type of accommodation in this course or have questions about physical access, then please the instructor know as soon as possible.
References


