The first part of the course is focused on a key foundational question in Economics. Rational choice theory, the core of the economic approach to human behavior, has become an influential approach in all of the social sciences. What makes individual actions rational? Rational choice theory offers a very simple answer: actions are rational if they reflect the maximizing of a consistent preference ordering. This theory, as it has been developed over many years, is now very detailed and complicated. One measure of the success of rational choice theory, perhaps, is for how long it has been able to withstand criticism. Recent developments, especially in behavioral economics, however, have succeeded in putting the standard model under pressure. In this course, we will present the theory of rational choice and also examine different objections to the standard model of rational choice. We shall consider the relationship between instrumental rationality, *Homo Economicus* and formal utility theory, including different conceptions of the notion of a preference and utility functions. The course will provide a critical introduction to Game Theory. A game is any decision problem where the outcome depends on the actions of more than one agent, as well as perhaps on other facts about the world. Game Theory is the study of what rational agents do in such situations. Topics include extensive and normal form games; equilibrium concepts, such as the Nash equilibrium and backward induction; and analyses of specific games such as the Prisoner’s Dilemma, the Stag Hunt, the Battle of the Sexes and pure coordination games. This course will not only introduce students to rational choice theory and game theory, but also discuss to what extent these mathematical theories explain social interactions.

The second part of the course will introduce students to the ways in which economic analysis has been applied to issues in social and political philosophy. The main topic in this part of the course is Social Choice Theory. We will examine both the formal aspects of social choice and their applications to democracy. The course will focus on May’s theorem and Arrow’s famous impossibility theorem, though we shall consider more general questions concerning voting paradoxes and strategic voting. Arguments as to whether Arrow’s theorem is relevant to understanding real world democracy will be another important focus. In addition, we will discuss ethical issues that arise in Economics. Topics include (time permitting) welfare economics; interpersonal comparison of utilities; Harsanyi’s Theorem; and the Coase Theorem and the moral limits of free markets.
Reading Material

The course will be based on readings from various textbooks are journal articles. The required textbooks for the course are (both books are available through the bookstore):


Additional readings for the course will be taken from the following textbooks and journal articles (the relevant material will be made available on the course website):


### Tentative Syllabus

The following is a tentative schedule for the course.

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topics</th>
<th>Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tue 1/26</td>
<td>Introductory Remarks</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Thu 1/28</td>
<td>Rationality in Economics</td>
<td>[G] Ch. 1</td>
</tr>
<tr>
<td>2</td>
<td>Tue 2/2</td>
<td>Rational Choice Theory</td>
<td>[G] Ch. 2</td>
</tr>
<tr>
<td>2</td>
<td>Thu 2/4</td>
<td>Rational Choice Theory</td>
<td>[G] Ch. 2</td>
</tr>
<tr>
<td>3</td>
<td>Tue 2/9</td>
<td>Rational Choice Theory</td>
<td>[R] Ch. 3</td>
</tr>
<tr>
<td>3</td>
<td>Thu 2/11</td>
<td>Rational Choice Theory</td>
<td>[R] Ch. 3</td>
</tr>
<tr>
<td>4</td>
<td>Tue 2/16</td>
<td>Rational Choice Theory</td>
<td>Elster (1998)</td>
</tr>
<tr>
<td>4</td>
<td>Thu 2/18</td>
<td>Game Theory</td>
<td>[G] Ch. 4</td>
</tr>
<tr>
<td>5</td>
<td>Tue 2/23</td>
<td>Game Theory</td>
<td>[G] Ch. 4</td>
</tr>
<tr>
<td>5</td>
<td>Thu 2/25</td>
<td>Game Theory</td>
<td>[R] Ch. 4</td>
</tr>
<tr>
<td>6</td>
<td>Tue 3/1</td>
<td>Game Theory</td>
<td>[R] Ch. 4</td>
</tr>
<tr>
<td>6</td>
<td>Thu 3/3</td>
<td>Game Theory</td>
<td>Colman (2003), Grune-Yanoff and Schweinzer (2008)</td>
</tr>
<tr>
<td>7</td>
<td>Tue 3/8</td>
<td>Explaining Economic Phenomena</td>
<td>[R] Ch. 7, Gibbard &amp; Varian (1978)</td>
</tr>
<tr>
<td>8</td>
<td>Tue 3/15</td>
<td><strong>Spring Break</strong></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Thu 3/17</td>
<td><strong>Spring Break</strong></td>
<td></td>
</tr>
</tbody>
</table>
Grading Policy

The course requirements are:

- **Participation** (15% of your final grade): There are 2 components that make up your Participation score.

  1. **Attendance**: Attendance is required. Each student will receive a maximum of 10 points for attendance and active participating in the course (keeping up with the reading, asking questions, contributing to the discussion, etc.). Points will be deducted for excessive unexcused absences. You are responsible to

  2. **Weekly writings**: Each week students must submit a 1-2 paragraph commentary on the weeks readings. The write-up can be a summary of the main themes, a discussion of an issue that you find particularly interesting, or a list of questions that you have about the material. The write-up is due **every Wednesday by 11.59pm**, and must be submitted via the course website on ELMS. Students will received 3 points for each write-up: 1 point if it is submitted on time and 1 point for style (complete sentences, no typos, well-structured, etc.) and 1 point for the content (does your write-up engage with the material that we are discussing in the lectures?). The first write-up is due on **Wed., Jan. 25 at 11.59pm**. It should include your major, the most advanced math class that you have taken, any Economics courses you have taken, and (at least) one question you have about the first lecture or Chapter 1 from [G].
• **Quizzes** (15% of your final grade). A number of quizzes will be given throughout the semester. The quizzes will be either in-class or online. I will generally announce the quizzes either on the website or in class (however, there may be some unannounced in-class quizzes). The 2 lowest quiz scores will be dropped. However, since the quizzes are designed, in part, to encourage attendance and to ensure that students keep up with the reading, **make-up quizzes will not be offered.**

• **Problem sets** (30% of your final grade). For the problem sets, you may discuss the problems with one another or with me as much as you want. **But you must always do the final write-up completely on your own.** A good strategy when working together is to use a blackboard and erase it completely before writing up your (separate) answers. We will also discuss the problem sets in class. The due dates for the problem sets are (the due dates may change depending on how fast we go through the material, consult the course website for the official due dates).

  – PS1: Rational Choice Theory, Due Date: **Monday, Feb. 15, 11.59pm.**
  – PS2: Game Theory, Due Date: **Wednesday, March 2, 11.59pm.**
  – PS3: Social Choice Theory I, Due Date: **Monday, April 4, 11.59pm.**
  – PS4: Social Choice Theory II, Due Date: **Monday, April 18, 11.59pm.**
  – PS5: Issues in Welfare Economics, Due Date: **Wednesday, March 11, 11.59pm.**

• **Midterm exam** (20% of your final grade). The midterm exam will consist of 2-3 short essay questions covering material from the first-half of the semester. The midterm exam will be due on **March 23, 2016, 11.59pm.**

• **Final exam** (20% of your final grade). The final will be cumulative and given as an in-class exam given during finals week. A study guide will be provided during the last week of the semester. The exam will be held during exam week (May 12 - 18, 2016). Consult Testudo for the date, time and location of the final exam.