Course Title: Decision Making and Rational Choice  
Course Code: PHI513  
Recommended Study Year: -  
No. of Credits/Term: 3  
Mode of Tuition: Lecture and Tutorial  
Class Contact Hours: 2 hours lecture per week  
1 hour tutorial per week  
Category in Major Programme: Philosophical Thinking  
Prerequisite(s): -  
Co-requisite(s): -  
Exclusion(s): -  
Exemption Requirement(s): -  

**Brief Course Description**

There are two well-developed philosophical theories that try to characterize what it means to make choices rationally, i.e., Decision Theory and Game Theory. The course will survey the important features of the two theories and explain related concepts. It will also explore paradoxical situations where the theories appear to clash with ordinary intuitions about rationality. Both theories have a wide range of applications, including business strategies, ethical and political choices, and the (dis)confirmation of scientific theories. This course will consider some of these applications, with an eye on their relation to certain general issues such as the evolution of the social contract.

**Aims**

1. To understand what are involved conceptually in any systematic account of making decision rationally.
2. To understand the possible applications as well as certain wider theoretical implications of decision and game theories.

**Learning Outcomes**

After completion of this course, the students should possess some basic knowledge of certain general features of decision making process, which the current theories attempt to reveal, as well as the scope of applications such theories may effect or facilitate. This knowledge will enable students to better analyse decision problems in their daily life or work and to understand the role of rational choice in the larger picture of human life.

**Indicative Content**

1. Basic Concepts of Decision Theory  
2. Decisions under Ignorance  
3. Decisions under Risk: Probability and Bayesian Inference  
4. Paradoxes of Utility Theory; Newcomb's problem  
5. Game Theory: Dominance and Equilibrium Strategies  
6. Prisoner's Dilemma and Failures of Equilibrium  
7. Mixed strategies  
8. Evolutionary Game Theory and Cooperation  
9. Rational Choice and Moral Agency  
10. Recent Topics in Decision and Game Theories

**Teaching Method**

Lecturing and seminar discussions (& reading reports)

**Measurement of Learning Outcomes**

Students should demonstrate the above mentioned knowledge, with its related capacity, in their
submitted papers as well as tutorial presentations and discussions in the course.

1. Students will write a term-end paper and expected to explicate certain general features of decision making process concerning the current theories.
2. Students will participate in certain amount of assignment to demonstrate the application of various decision theories and show how they may effect and facilitate.
3. Students will engage in in-class discussion and will be expect to show their ability of confronting decision problems in their daily life or work.
4. Students will be expected to realize the role of rational choice in the larger picture of human life via individual or group work/presentation.

Assessment
100% papers

Required Readings

Supplementary Readings