PHIL 411 – Theories of Decision

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# Philosophy 411 – Theories of Decision Spring 2020

## The Basics:

Instructor: Tom Wilk Email: twilk@gmu.edu Phone: 814-934-8844 Office Location: Robinson B443 Office Hours: TR 1:30-2:30 PM Website: http://tomwilk.net.phil-411-spring-2020

## What's this class about?

This course investigates rational decision making at the individual and group level. We begin with decision theory and consider how a single agent ought to act in a choice situation given her knowledge, or lack thereof, about the world and her particular risk profile. We will examine various problems such as the Allais Paradox, Newcomb's Problem, and the Ellsberg Paradox and some applications of decision theory in philosophy of religion and regarding the choice to have children. We then move on to game theory and explore different kinds of competitive and cooperative strategic interactions between agents, define different kinds of solutions (or equilibria) of these games, and apply game theory to the study of morality and convention. Finally, if time allows, we will turn to an examination of the various cognitive biases that can undermine rational decision making.

## What we'll be reading:

Michael D. Resnik. *Choices: An Introduction to Decision Theory*. University of Minnesota Press, Minneapolis, 1987.

Optional Text (this text gives a bit more background and a bit less formalism): Martin Peterson. An Introduction to Decision Theory. 2nd Ed. Cambridge University Press, New York, 2017.

Additional readings will be posted to Blackboard or otherwise available online.

## **Learning Objectives**

Upon completion of the course, successful students will:

- 1) demonstrate a working understanding of formal models of decisions and games;
- 2) translate decision problems and games into matrices and trees and use those to determine the most rational choices;
- 3) understand some of the limits of formal decision theory and game theory and assumptions behind the formal models; and
- 4) demonstrate greater insight into decision-making processes through the application of formal models to philosophical problems.

### Evaluation

Participation and Attendance	5 %	
Exercise Sets	30 %	
Midterm Exam	30 %	March 7
Final Exam	35 %	May TBD

**Exercise Sets** will be assigned about every two weeks during the semester. You will have one week to complete an exercise set once it is assigned, and a hard copy must be submitted in class on the day it is due.

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**Exams:** Both the midterm and final will be in-class exams. The final will be cumulative in the sense that you will have to apply skills learned in the first half of the semester in order to answer the questions on the exam. The final exam will also have an **essay** portion that will be provided two weeks in advance. You will write a **4-6 page** essay on one of 3-4 prompts and turn it in on the day of the final exam.

# **Course Policies:**

*Attendance*: Attendance is required and will be taken daily. You are allowed to miss up to two class meetings without penalty. Each additional absence will be penalized ½ percentage point off of your Attendance and Participation grade.

*Participation*: Participation will be gauged on the basis of active engagement in class discussion and on work completed in class.

**Reading and Preparedness:** You're required to come to class having read the assignment for the day *in its entirety*, preferably twice and having completed any Exercise Sets due prior to that day's class.

*Schedule of Readings and Assignments*: Reading assignments will be posted on Blackboard. Please check the online reading schedule on a regular basis to be sure that you're reading at the right pace. The assignment schedule is subject to amendment to reflect the natural pace of the course.

**Discussion:** Do your best to **be part of the discussion**. I know it's not always easy and it's not everyone's forte. Sometimes you might not have much to say and sometimes you might feel that the discussion has moved on before you've had time to fully formulate your thought. These are some hurdles we need to try to overcome this semester. Not every thought expressed is going to be groundbreaking, well-formed, and timely. That's OK; the important thing is that you say something in an effort to contribute to the discussion. **My job** is to draw out the relevancy of what you've said and connect it to the thoughts we're discussing. I'm here to help the discussion, not judge your contributions.

That being said, be prepared to **defend what you say**. Philosophy is sometimes thought of as combative. I think that's a bit strong, but it certainly requires debate and thoughtful discussion. Toward this end, I (and your colleagues) will often ask you to explain what you've said in greater detail, to clarify your position or your understanding of the position expressed in the reading, or to offer reasons in defense of a claim you've made. You should not take offense to being asked to defend your views. *I only ask you to do so because I think you're capable of doing so; it's a sign of respect and the heart of all reasonable discussion and debate*.

Finally, **be kind and courteous** to your colleagues. We're striving to create a *community of inquiry* in our classroom, in which everyone feels comfortable expressing his or her views and questioning those of others. We'll be discussing some sensitive topics on which some folks will have very strong opinions. A successful discussion will often require that we flirt with the borders of propriety in our discussions. The only way we can have discussions of this nature in a productive way is if we always strive to be courteous to each other. We will not cut each other off. Everyone will be heard, and we will *listen carefully* to the views of others and interpret them charitably.

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*Late Work Policy:* Late Exercise Set assignments will be penalized 1/3 of a letter grade for every 2 days they are late. Exams must be taken at the scheduled time. *Of course, on occasion, life happens.* If a circumstance arises that might interfere with the timely completion of your assignments, please notify me immediately and we will discuss options for amending the timetable. DO NOT wait until the night before the assignment is due or the exam is scheduled to contact me. I understand that we all face many time and resource constraints, and I aim to be as reasonable as possible in this regard. I ask that you do the same.

# Additional (but IMPOPTANT) Course Policies and Information:

- Please **turn off your phone**, **laptop**, **and tablet** in class. All lecture slides will be made available to you on Blackboard. If you feel that your success in the class hinges on using a laptop or tablet for note taking, you need to talk to me about it in office hours before you will be permitted to do so.
- If you feel the need to **appeal the grade** you have earned on an assignment, you must submit your appeal to me *in writing* within two days of the grade being posted. The written appeal must explain in detail why you believe the grade on your assignment is in error and must present evidence to support your argument.
- **Disabilities Support Services:** Students who may be in need of support services should contact GMU Disability Services to establish eligibility and to arrange appropriate accommodations: <a href="http://ds.gmu.edu/">http://ds.gmu.edu/</a>
- **Counseling Services:** Should you need counseling services or just need someone to listen, please know that the Counseling and Psychological Services office is here to provide emotional support and assistance for your mental health needs as you make your way through your time at Mason. Call: (703) 993-2380 or visit <u>https://caps.gmu.edu/</u>
- Sexual Misconduct and Interpersonal Violence: George Mason University is committed to providing a learning, living and working environment that is free from discrimination, and we are committed to a campus that is free of sexual misconduct and other acts of interpersonal violence in order to promote community well-being and student success. We encourage students who believe that they have been sexually harassed, assaulted or subjected to sexual misconduct to seek assistance and support. University Policy 1202 Sexual Harassment and Misconduct (<a href="http://universitypolicy.gmu.edu/policies/sexual-harassment-policy/">http://universitypolicy.gmu.edu/policies/sexual-harassment-policy/</a>) speaks to the specifics of our process, our resources, and the options available to you.

Confidential student resources are available on campus at the Student Support and Advocacy Center (<u>http://ssac.gmu.edu/</u>), Counseling and Psychological Services (<u>http://caps.gmu.edu/</u>), and Student Health Services (<u>http://shs.gmu.edu/</u>).

All other members of the University community (including faculty, except those noted above) are <u>not</u> considered confidential resources and are **required** to report incidents of sexual misconduct to the University Title IX Coordinator. For a full list of resources, support opportunities, and reporting options, contact Dr. Jennifer Hammat, Title IX Coordinator, at <u>http://diversity.gmu.edu/title-ix</u>, at 703-993-8730, or in the Compliance, Diversity, and Ethics office in the Aquia Building, Suite 373.

- Security: In the event of an emergency, shelter in place unless our location is effected, in which case follow the evacuation procedures for the building. After evacuation, seek shelter.
- *This syllabus can be amended at any time by the instructor.* Amendments will be posted to the course website.