

Thinking and Decision Making

PSYC UN2235 (3 points)

Tentative Syllabus for Spring 2021

Course Information

Tuesdays & Thursdays, 11:40am-12:55pm

Location: online, synchronous

Instructor Information

Katherine Fox-Glassman, PhD

Office: 314 Schermerhorn

Spring Office Hours: time TBD, link will be available on Canvas

email: kjt2111@columbia.edu

pronouns: she/her

TA Information

Please check our Canvas page for up-to-date lists of TA office hours. All Zoom links for TA office hours can be found in the Zoom Class Sessions section of our Canvas site.

For general course inquiries (course content, assignment clarifications, etc.) that are not answered by the syllabus, please post your question to the **Canvas Discussions page** (you're probably not the only one wondering!).

For personal inquiries (missed deadlines, absences, issues uploading assignments, personal concerns, etc.) please email our **TA email: psyc2235ta@gmail.com**.

Grad TAs

John Thorp (jnt2136@columbia.edu)

Undergrad TAs

tbd

Description of the Spring 2020 Course

This course serves as an introduction to the psychology of judgment and decision making. It will cover normative, prescriptive, and descriptive theories of judgment and choice; models of decision processes and the effects of context, experience, memory, and information on decision making; biases and heuristics that influence decision making; and real-world applications of these topics.

Prerequisites

Science of Psychology (1001) or Mind, Brain, & Behavior (1010), or equivalent intro psych course.

Students who have not taken one of these courses may register with instructor permission.

Role in the Psychology Curriculum

For the Psychology major and concentration, and for the Psychology Post-Bac certificate program, this course counts toward the Group I Distribution Requirement. For the Neuroscience & Behavior major, this course counts toward the P4 lecture requirement. For the Special Concentration in Business Management, this course counts as an elective.

Motivating Questions

1. How do we make decisions: what are the processes through which we weigh options and make choices, and how might these differ from the “ideal” or “typical” processes suggested by decision theories? When are the “ideal” decision processes not so ideal after all?
2. Can we say that people have *true preferences*, or do most choices in fact show *revealed preferences* that depend on the context of the decision, our ability to remember past experiences when deciding, and even the way the various options are presented to us?
3. How might we make “better” decisions—and, for that matter, how do we even define a “good decision?” Is it one in which we used a sound *decision process*, or one that led to a good *outcome*, or both—or maybe neither?
4. How can an understanding of decision science be applied to understand or influence real-world decisions in domains ranging from marketing and healthcare to public policy and disaster preparedness?

Course Overview

All of us make thousands of decisions every day. Many are simple and almost automatic: how many times to snooze our alarm, what to eat for breakfast, whether to cross the street or not on a blinking “don’t-walk” sign. Other decisions, like whether to carry an umbrella on a cloudy day or to put off an assignment in favor of going out for a drink with friends, require a bit more conscious considering of information. Still others require complicated calculations or deliberation: where to travel for spring break; which college or grad school to attend; whether to begin or end a romantic relationship.

Each of these decisions invokes a set of related cognitive processes, and researchers from several fields (psychology, economics, and neuroscience, among others) study these processes. This course will examine the ways we judge situations, probabilities, and decision options, and how we go about making choices. We will consider many different sources of evidence, from behavioral observation to cognitive models to the firings of neurons in the brain.

We will discuss different decision modes and decision strategies. We’ll consider normative decision models (ones that identify the “best” decision to make), prescriptive decision models (those that indicate what people *ought* to do), and descriptive decision models (those that illustrate the ways that people *actually do* make decisions). We’ll discuss the differences between studying questions like: “why *don’t* people follow the normative or prescriptive model?” vs. “why *do* people follow the descriptive models that they do?” The first approach tends to identify what we call cognitive biases, fallacies, or paradoxes, while the second question more often leads to the development of decision heuristics—we’ll talk in depth about many of these heuristics, biases, fallacies, and paradoxes.

We will connect all of these topics by considering their real-world applications. Many different fields require their practitioners to have an in-depth understanding of decision and judgment theory—notably marketing and advertising, which deploy psychology and behavioral economics findings to maximize earnings. Other fields are beginning to realize the benefits of incorporating decision theory into their efforts—the health and disaster preparedness professions, for example, are right now actively working to better understand the ways that people judge and use health or hazard information. These efforts often draw on the concept of “decision architecture,” or the way that the format of the options can be altered to “nudge” and (perhaps) improve people’s decision processes.

Course Requirements

Grading

I don't grade on a curve in this class, so your grade will be determined only by your own work, not by how well you do relative to the other students. There is no pre-determined proportion of students who will receive As, Bs, Cs, etc.—if every student does A-level work, then everyone will receive an A in the course. Your grade will be calculated out of a total of 1000 points, as follows:

Class intro survey:	25 points	(due before class on Thursday, January 14)
Class participation:	95 points	(during every class)
Written assignments:	180 points	(problem sets & Decision Analysis)
Lowest midterm:	100 points	
Middle midterm:	150 points	
Highest midterm:	200 points	
<u>Final:</u>	<u>250 points</u>	(take-home; available via Canvas April 23-24)
Total:	1000 points	

The cutoffs for each letter grade are as follows:

990* – 1000 points = A+
930 – 989.9 points = A
900 – 929.9 points = A-
870 – 899.9 points = B+
830 – 869.9 points = B
800 – 829.9 points = B-
770 – 799.9 points = C+
730 – 769.9 points = C
700 – 729.9 points = C-
600 – 699.9 points = D
0 – 599.9 points = F

*In this class, an A+ is a rare distinction indicating exceptional work. If no students score above 990 points, then the cutoff for the grade of A+ may be lowered.

Components of the Final Grade

Class intro survey. You will fill out a survey before class starts, and we'll use your (anonymous) responses to illustrate many of the effects we discuss in the course. To receive full points for the intro survey, you must complete it before the beginning of the second class meeting (January 14, 11:40 am).

Class participation. You will earn your participation grade (95 points out of 1000 total) by actively participating in our virtual lectures. One component of "participation" is responding to poll questions during class. These questions will serve several purposes: (1) to give me real-time feedback on what concepts you're understanding and which topics we might want to spend a little more time on; (2) to help you engage with the material and encourage you to be active learners; (3) to help you gauge your own understanding as we go; and (4) to augment the results of the class intro survey with polls and questions that are better asked "live" than in an online survey.

Another component of “participation” is being an active member of your discussion groups when we break from the whole-class lecture to discuss particular topics. You are strongly encouraged to contribute to your group by turning on your camera and microphone; if you’re not able to have your camera on, you may participate just via audio or via the chat. Please check in with the instructor or a TA if you are having trouble contributing to your group’s discussion given the constraints of your setup.

The third component of active class participation coming to each class prepared to learn. This involves completing the reading assignments and watching the assigned video mini-lectures for each topic, and then responding to a short (1-3 question) quiz on Canvas before the start of each lecture.

There are 5 points of participation available for each class meeting: poll-question responses are worth 2 points for each lecture; active group-discussion participation is worth 1 point; the pre-class quizzes are worth 2 points. Out of the 24 lectures for which we count participation (starting in the second week of classes), your lowest 5 participation scores will be dropped. The highest 19 will make up your participation grade.

This course is designed for students to take part in synchronously (live). If you are not able to join our lectures in real time, you will not be getting the most out of the course, nor will you be able to earn full participation points. I know this puts some of you in a difficult position because of the time zone you’re in—if you are unable to take this course in Spring 2021 because of your time zone and you expect to be here next year, please let me know and I’ll reserve you a spot in the Spring 2022 section of the course.

Problem Sets. At the end of each week, you will complete a short problem set to apply and test your knowledge of the week’s topics before we move on to new concepts. The format of the problem sets will vary, but the purpose will always be to help you to examine and connect key course concepts. You are encouraged to work with your classmates and ask your TAs questions. *Problem sets will be graded for effort, not accuracy.* This means that if you answered every question to the best of your ability, you turned in the problem set on time, and your answers represent your own work, you will receive full points. This also means that **it’s up to you to check your answers against the answer keys**, which will be posted on Canvas shortly after each problem set is due.

There will be 11 problem sets, worth up to 10 points each. When calculating your final grade, we will use only your 10 highest scores out of the 11. Problem sets will be available each Thursday after class, and cover material from that week’s lectures. Each problem set is due before class starts on the Tuesday after it is assigned. Problem sets will be posted, and should be turned in, via Canvas.

Even though problem sets are not graded for accuracy, spending some time completing each of them to the best of your ability will improve your understanding of the course material and help you prepare for the exams. Plus, doing good work on your problem sets is the *only possible way* to end up with a final letter grade higher than your final point total would earn. (See Class Policies, below.)

Decision Analysis. You won’t have a problem set to complete over Spring Break; instead, you’ll be writing an analysis of a recent decision you’ve made. This assignment is designed to help you learn about decision goals and modes while at the same time getting some insight into your own decision process. Students generally enjoy writing this assignment, and your TAs and I always enjoy reading your analyses. Unlike the problem sets, the Decision Analysis *is* graded, based on your ability to clearly and accurately apply course concepts to your analysis of your decision. The Decision Analysis is worth 80 points, and is due on the Tuesday after Spring Break.

Midterm Exams. We will have three midterms, which will each include a mix of short-answer and multiple-choice questions. They will be administered via Canvas, and will be open-book, open-notes. Each will be available during approximately a 24-hour period; they will not be otherwise timed. We will

post some sample questions and a review sheet on Canvas before each exam. The midterms on which you score better will be more heavily weighted toward your final grade: your lowest midterm will be scaled out of 100 points, your second-highest out of 150, and your highest out of 200. Midterms will be scheduled for the following three Fridays:

Midterm 1: February 5

Midterm 2: February 26

Midterm 3: March 26

Because you will have access to all course materials during these take-home exams, the questions they ask will be somewhat more challenging and in-depth than a typical in-class exam. This means that you'll need to study ahead of the exam window, and get all of your questions clarified, in order to have a strong enough understanding to apply, connect, and synthesize course concepts during the exam. Research in cognitive psychology has shown that we learn most effectively by making mistakes and then correcting ourselves. The problem sets are your first opportunity to make instructive mistakes, but the midterms are part of your learning process as well. So making sure that you understand why you missed the points you did on the midterms (and also why you earned the points you did!) is an important first step toward preparing for the final exam.

Final Exam. The final will cover the material from the whole course, with a greater emphasis on topics from after the second midterm. Like the midterms, it will consist of short-answer and multiple-choice questions, and will be administered on Canvas in an open-book, open-notes setup. The final is worth 250 points.

Tentative Final Exam Date: Thursday-Friday, April 22-23

Unforeseen emergencies are the only acceptable excuses for not completing the final exam during the 48-hour period when it will be available. Please make sure you do not have any travel or major work commitments scheduled for the projected dates of the final exam. Because this class is so large, we are not able to shift the final-exam dates for anyone. The 2-day window for the final is already designed with the expectation that most of you will have other exams or papers due during those days. The final itself is intended to take only a couple of hours; the more you prepare for it ahead of time (like you would for an in-class exam), the faster you'll be able to complete it.

Course Policies

Lecture attendance. Active participation during lectures is a fundamental element of this course. Lectures will cover topics not included in your readings, and we will try to stop frequently for class discussions, group exercises, and other activities. If you miss a class, make sure you go over the lecture slides and recording, and come to our office hours to ask questions about any topics you think you may need help catching up on.

You cannot make up participation points for classes you missed, even if those absences are excused. But since life sometimes gets in the way of college for all of us at some point, **every student gets five free passes**—only the highest 19 scores are counted out of the 24 lectures for which we'll be counting participation.

Lecture slides & recordings. We will post slides and a video recording after each class, so you do not need to copy down everything that's written on each slide. The slides are numbered to help you compare your class notes to the slides. Zoom does not record in breakout rooms, however, so if you rely on reviewing lecture videos keep in mind that you will not be able to re-visit the small-group discussions you participated in.

Late assignments. Problem sets will lose one point for every half-day past their due date. This means that problem sets turned in more than five days after the due date receive no credit, though I encourage you to still submit them, since (a) completing the problem sets is the first step to effective studying for exams, and (b) even if they received no credit, they can still be used at the end of the semester to determine whether you qualify for a grade bump (see below).

Decision analysis papers will lose 5 points per day past the due date. Midterm exams will lose 10% (of the total points; this is equivalent to one letter grade) for every half-day past the deadline.

Extra Credit. There are **no extra credit opportunities** in this class, but students who end up on the borderline between grades may be bumped up to the next higher grade based on the quality of their problem set work. At the end of the semester when I calculate grades, I will look back at the problem sets of every student who is very close to the next higher grade range. Students who are in this position and whose problem sets show a higher average score than their course grade will be bumped up to the next higher grade. I grade the problem sets blind to the student's current grade, and the resulting decision of whether to bump up the course grade is final.

For example: a student with 895 points would fall into the B+ range, but is very close to the A- cutoff of 900 points. If his problem sets, when graded, average more than 89.5%, his grade will be bumped up to an A-. If his problem sets average 89.5% or lower, his grade of B+ will stand.

Class Conduct. We will decide as a class on our expectations for virtual class conduct during our first meeting in January. But my strong recommendation is to find ways to minimize your distractions while engaged in class: put Zoom on fullscreen, turn off notifications on your computer, and put your phone out of reach.

Academic Integrity

Academic honesty includes presenting only your own work in exams and assignments, and correctly attributing others' ideas where appropriate. Taking credit for work that is not your own is a serious violation within the academic community, and anyone found to be cheating or plagiarizing in this class will be reported to the university and will receive a 0 on the assignment in question. This includes getting help from others during exams, as well as copying another student's (or a previous year's answer key's) wording on your problem sets. Detailed definitions and examples of academic dishonesty (and a rundown of the consequences) are available in Columbia's Guide to Academic Integrity (<http://www.college.columbia.edu/academics/integrity>). It might not be the most riveting bit of text, but you're expected to follow it, so you should know what it says.

I assume you're all here because you're interested in the course topics and enthusiastic to learn as much as you can. But I know that in real life, stuff happens. I always prefer to deal with any issues before they get so bad that they become overwhelming, or so bad that a student feels that depending on someone else's work is his or her best (or only) option. So please do come to me if you're feeling stressed out about the class workload or if there's a concept you're just not getting based on how the readings and lectures explained it. If you have an issue that you'd rather not talk about with me, you could speak with your academic advisor or dean; with a Psychology Program Advisor (DUS); or with the counselors at Columbia's CPS (<http://health.columbia.edu/services/cps>).

Diversity & Inclusion

Every learning environment should accommodate the wide range of opinions, backgrounds, and identities that students bring into the room. And as psychologists, we know of many specific and important ways in which groups benefit from diversity of all kinds—nationality, sex/gender, sexuality, race, class, religion, ability, and many others. To help me make the course as inclusive as possible, please let me know if any of the following is true:

- You have a name and/or set of pronouns that differ from those that appear in SSOL or on Canvas;
- Something that was said in class made you feel uncomfortable or unwelcome;
- Your ability to take part in our class is being affected by events or experiences outside of our class. Even if I can't help you directly, I can try to connect you with resources or support on or off campus.

Like most people, I am still in the process of learning about diverse perspectives and identities. I'm very open to feedback; on this topic (and many others) you can likely teach me as much as, if not more than, I can teach you.

Students With Disabilities

In order to receive disability-related academic accommodations for this course, students must first be registered with their school Disability Services (DS) office. Detailed information is available online for both the [Columbia](#) and [Barnard](#) registration processes. The process can take several weeks—don't wait until just before the first exam. Refer to the appropriate website for information regarding deadlines, documentation requirements, and [drop-in hours](#) (Columbia) / [intake session](#) (Barnard).

For this course, Columbia students are **not** required to have testing forms or accommodation letters signed by faculty. The Instructor section of the form has already been completed and does not need to be signed by the professor. Instead, students should complete the Student section of the form and submit it to DS. Master forms are available in the Disability Services office or online:

<https://health.columbia.edu/services/testing-accommodations>.

The online exams for this course are timed to allow every student the flexibility to fit them into their schedule, and to spend as much time on them as they feel they need. Since the exams are designed to take 1-2 hours and you will have a 24-hour period to complete each one, there will not be extra time available to anyone, regardless of accommodations for in-class exams.

Wellness

All of us at some point experience challenges to our mental health and well-being. This is true at any time, and even more so this year. I urge you to take care of yourselves—and of each other. Please prioritize your mental health and wellbeing and know that there are many resources available to you both within our classroom community and throughout the university:

<https://health.columbia.edu/content/counseling-and-psychological-services>

<http://blogs.cuit.columbia.edu/nightline/>

<https://universitylife.columbia.edu/student-resources-directory#health>

<https://columbiavirtualcampus.com/>

We are in this together. Please reach out for help if you need it, and if you see others who are struggling, please point them toward these or other sources of help, or encourage them to talk to me or one of the other Directors of Undergraduate Studies in the Psychology Department.

Readings

The chapters in our textbook are typically around 15-20 pages long. Part of their purpose is to give you some exposure to our topics before we cover them in class, so that it's easier for you to keep up with the pace of lectures and contribute to in-class discussions. But there is also content in the readings that won't be covered directly in class that is important to your understanding of course concepts. To that end, there will be portions of the readings that we won't discuss directly, but which will be tested on.

The readings listed here are a tentative guide—please **keep an eye on Canvas for the most up to date reading lists**, including a detailed breakdown of which readings will be assigned for each class meeting. **The reading assignments for each class meeting will be posted in the Modules section of our Canvas site.**

Textbook

There is one required textbook for this class:

- ❖ Kim, Nancy. (2018) *Judgment and Decision Making: In the lab and in the world*. Palgrave. 1st ed. ISBN-13: 978-1137269553

If it's not feasible for you to buy a copy, here are some alternate ways to get access:

- We'll make the chapters for the first couple of readings available on Canvas, for those of you who would like to shop the course before committing to buying the book.
- For those of you on campus, there will also be a couple of physical copies available through Columbia Library's Pick-up Service.
- The CU Library can scan a limited amount of the book (1 chapter) for each student on request.
- The CU Library has also been able to get a license for the e-book version of our text. The license will only allow access to one person at a time, so if you plan to rely on this method of accessing the book, you should leave plenty of time to do your readings, as you might have to wait until another student has finished. If you use the e-book, please make sure to close out of the system as soon as you're done, so that others will have access—please don't leave the book open in one tab during times you're not actively reading it!

You can use this link to for pick-up or scanning requests: <https://clio.columbia.edu/catalog/14449853>. If none of these access options is working for you, please contact our TA email address for help.

Other Required Reading

We will also read some empirical papers to get a better idea of how researchers have discovered and tested some of the phenomena and theories we'll be learning about. We'll also occasionally read chapters from other textbooks. These papers and additional chapters will be posted on Canvas.

Supplemental Reading

Supplemental readings are 100% optional. Some are empirical papers, but most come from an older book that is a great resource for basic explanations of our course topics. If you're having trouble with the way Hardman discusses a topic, I recommend seeing how Plous explains it, and then going back to Hardman for a more up-to-date perspective on it.

- ❖ Plous, S. (1993). *The Psychology of Judgment and Decision Making*. New York: McGraw-Hill. ISBN: 0070504776

Tentative List of Topics & Readings

All chapters are from Kim (our required text), unless otherwise specified. The order of topics and some readings may change. Please consult our Canvas site to find the final reading assignments, links to non-textbook readings, and short video lectures that will be assigned as preparation for each class.

Lec	Date	Topics	Tentative reading assignments (optional readings in italics)	Due
1	1/12	Introduction to the Course	Chapters 1, 4, & 12 (<i>Plous, Chapters 1-4</i>)	
2	1/14	Decision Making in Context		Intro Survey
3	1/19	Normative theories of judgment & choice I	Baguely Box 11.3 (p388) Silver Ch. 8 (<i>Plous, Ch. 12</i>)	
4	1/21	Normative theories of judgment & choice II	Chapter 8 Hastie/Dawes Ch. 11 (<i>Plous, Ch. 7 & 8</i>)	
5	1/26	Descriptive theories of judgment I	Hastie/Dawes Ch. 7 Chapter 11	PS1
6	1/28	Descriptive theories of judgment II	Chapter 2 (<i>Plous, Ch. 10, 11, 15</i>)	
7	2/2	Descriptive theories of judgment III	Chapter 3 (<i>Plous, Ch. 13, 19</i>)	PS2
8	2/4	Descriptive theories of choice I	Chapter 9 Kahneman et al., 1991 (<i>Plous, Ch. 9</i>)	
	2/5	Midterm 1 (covering topics from Lectures 1-7)		
9	2/9	Descriptive theories of choice II	Chapter 7 (<i>Plous, Ch. 5 & 6</i>)	PS3
10	2/11	Decisions under uncertainty	Hardman, Ch. 7 (pp. 65-72) - good review for Midterm 1 Hertwig & Erev, 2009	
11	2/16	Perception of risk	Chapter 5 Slovic, et al., 2004	PS4
12	2/11	Time & distance I	Chapter 6 (pp. 112-116) Baron, Ch. 19 (pp. 471-496)	

Lec	Date	Topics	Tentative reading assignments <i>(optional readings in italics)</i>	Due
13	2/23	Time & distance II / Intro to decision modes	Trope & Liberman, 2010 "Ways of Arriving at a Decision"	PS5
14	2/25	Decision modes	"Ways of Arriving at a Decision"	
	2/27	Midterm 2 (covering topics from Lectures 8-13)		
<i>SPRING BREAK</i>				
15	3/9	Process models	Johnson, et al., 2007	Decision Analysis
16	3/11	Cognitive neuroscience of decision making	Cassidy, 2006 Hastie/Dawes, Chapter 13.1	
17	3/16	The effects of affect I	Chapter 6 (pp. 110-112) Hastie/Dawes, Ch 13.2 (pp. 304-10) Wilson & Gilbert, 2005	PS6
18	3/18	The effects of affect II	Lerner et al., 2004	
19	3/23	Individual differences I	Chapter 6 (pp. 103-110)	PS7
20	3/25	Individual differences II	Heine, Chapter 9, pp. 349-367 Mullainathan & Shafir, Ch. 5	
	3/27	Midterm 3 (covering topics from Lectures 13-20)		
21	3/30	Behavioral Game Theory I	Chapter 14	PS8
22	4/1	Behavioral Game Theory II	Baron, Ch. 18	
23	4/6	Decisions by groups	Plous, Ch. 17 & 18 <i>(Rose, 2011)</i>	PS9
24	4/8	Group decisions & minority influence	<i>choose either:</i> Thomas-Hunt & Phillips, 2004 <i>or</i> Sommers, 2006	
25	4/13	Decision architecture I	Thaler & Sunstein, 2009 Johnson et al., 2012	PS10
26	4/15	Decision architecture II	<i>(Plus several fun optional readings - see Canvas for links)</i>	
	4/20			PS11
4/22	4/23	Final Exam (cumulative, with emphasis on Lectures 21-26)		