


# Spring 2024 Courses in Social and Decision Sciences

## Take a look at the courses we will be teaching in Spring 2024!

- Classes with a pink box around the title are appropriate for first-year students.
- Courses that count towards Behavioral Economics requirements are outlined in Yellow
- Courses that count towards Decision Science requirements are outlined in Green
- Courses that count towards Policy and Management requirements are outlined in Blue
- Courses with a  count towards the Dietrich College General Education Requirements

### 88-120 Reason, Passion and Cognition TR 12:30-1:50PM

How do we make decisions? Reason, Passion, and Cognition will be an introduction to the psychology of preference, judgment, and choice. Why do people behave in ways that cannot be defended as "rational" - and how do these deviations inform us about the processes that the mind uses to make fast-and-frugal decisions? The course will focus on the ways that cognitive and emotional processes relate to decisions made in the laboratory and in everyday decision making and will be based on rigorous experimental research.

01

### 88-221 Markets, Democracy and Public Policy MW 12:30-1:50PM

In this course, you will learn a powerful set of concepts for analyzing: (i) What markets are and the positive and negative effects they may have on individuals and society (ii) What democracy is, how markets and democracy may interact, and some ways in which democracy is vulnerable (iii) How public policy might soften some of the negative effects of markets and support democracy. You will learn theory via application to historical and current real-world examples. You will appreciate how theory illuminates the real-world examples.

02

### 88-223 Decision Analysis TR 9:30-10:50AM F 10:00-10:50AM

This course offers practical guidance about how to make better decisions and teaches students how to use modeling to do decision analysis. We analyze decisions involving uncertainty, risk, and time delay. In addition to methods of decision analysis, the course will also emphasize sensitivity analysis and communication of recommendations. This course will teach you how to make good decisions. Specifically, students should be able to:

- Employ a systematic approach to analyzing decision problems;
- Use Excel to model the relationship between choice alternatives and consequences;
- Evaluate tradeoffs that may involve risk or time delay;
- Deal with uncertainties by gathering information and assessing probabilities;
- Use Excel to perform simulation in order to better forecast systemic uncertainties;
- Take account of the sensitivity of their projections to their specific assumptions;
- Communicate their decisions and the rationale for them.

03

### 88-234 Negotiation: International Focus MW 9:30-10:50AM

Negotiation is a process in which two or more parties undertake a process to resolve conflicting interests. Decision makers use negotiation in a variety of circumstances to reach agreements among countries, among employers and employees, among firms, and among family and friends. The objective of this course is to understand the process of negotiations and how the structure of the negotiation environment affects the outcomes achieved. Students will learn to analyze the features of the negotiation environment, develop an understanding of effective negotiation strategies, and identify the barriers to reaching wise agreements. This course will focus on negotiations in international contexts. By the end of the course, students will be able to:

- Describe and apply the basic strategies in negotiations
- Explain how different strategic choices and interpersonal skills drive relative success at the bargaining table
- Learn how to successfully prepare for a negotiation
- Identify the psychological processes underlying the judgment of negotiators- and the biases that typically affect them in negotiations
- Explore negotiations that contain elements of both cooperation and competition, learning how to identify potential sources of joint gains and create value
- Develop self-awareness and gain valuable experience from repeated negotiation exercises
- Critique and assess the strategies and mistakes that affect the outcomes of real life negotiations

04

### 88-252 Cause and Effect TR 3:30-4:50PM

This course focuses on the scientific problem of analyzing causal hypotheses in real-world settings, not on the mathematical details of regression. After clearly distinguishing prediction from causation, we discuss how to represent causal hypotheses and how to use regressions to analyze both predictive and causal hypotheses. Using in-class data exercises throughout, we will examine how to move from an interesting but somewhat vague question about the world to a clear statistical model that, when estimated, meaningfully addresses the question asked. After mastering basic techniques, we will introduce students to more advanced econometric approaches such as panel regressions and instrumental variables to deal with trickier settings in which causal inference is more challenging (e.g., do more guns lead to more violence?). In keeping with the hands-on philosophy of the course, a central focus of the semester will be a group research paper/presentation where students will have the opportunity to formulate and empirically test a research question of their choosing. Students will learn how to find, clean, and analyze a new dataset, and then concisely communicate their findings in the form of a scientific paper (and accompanying presentation). The research project is excellent preparation for an undergraduate thesis.

05

### 88-255 Strategic Decision Making MW 2:00-3:20PM

How do people navigate social interactions when their goals are in conflict? When should a person cooperate and when should a person pursue self-interest in an ongoing social interaction? How can a business establish strategic partnerships that create value and at the same time battle with competitors to take advantage of the value they create? Strategic decision making requires a framework to think through the implications of cooperation and of competition. This course gives you a systematic approach to understanding how people, firms, or countries interact with one another to achieve their own goals. We focus on the practical application of theory-based strategic principles and on their behavioral validity (whereas traditional game theory courses usually focus on formal modeling techniques). Readings will focus on real-life stories. The class will be organized as a seminar, centered around discussion, not lecture. Students will also be placed in the role of strategist in occasional simulations in class.

06

### 88-275 Bubbles: Data Science for Human Minds MW 3:30-4:50PM

No one is an island: from the casual interactions of day-to-day life to the global markets that supply us with the fruits of our technologies, the fabric of experience is woven out of interaction with other people. This course will introduce you to basic ideas in psychology, economics, and the social sciences that help us understand how this happens. We'll learn about both the mysterious inner world of human experience, and the equally strange and striking social phenomena that they lead to. We'll experiment on ourselves in class to discover unexpected aspects of our own unconscious, and how irrational even the best groups can be. Most importantly, we'll send you out into the world - the physical worlds, and the virtual ones online to conduct your own investigations. We know extraordinarily little about the "human animal", and the best way to learn is to go look for ourselves.

07

### 88-284 Topics of Law: The Bill of Rights T 7:00-9:50PM

This course examines the history and place of the Bill of Rights in our nation's constitutional framework. It focuses on the historical origins of the U.S. Constitution, of each of the first ten amendments to the Constitution (that we refer to as the "Bill of Rights"), how the meanings and interpretations of these have evolved over time, and what they mean to us today. Each article of the Bill of Rights will be examined in terms of its original intentions, and then through cases that have challenged and been interpreted through the Bill's articles. The goals of the course are that students will learn each of the Amendments, gain an understanding of how the Supreme Court of the United States functions and understand the often-polarized views of how the Bill of Rights should be interpreted by the Courts.

08

### 88-290 Confession, Lies and Gossip TR 12:30-1:50PM

Human beings are social creatures, and sharing thoughts, feelings, and information with others is fundamental to the human experience. We engage in this type of disclosure frequently, often without thought or deliberation. Yet the act of disclosing information is fraught with risk, particularly in the digital age where what we share can be widely accessed and permanently stored. This course aims to cast this ubiquitous act in a new light, investigating many of the behaviors we take for granted, and explaining common counter-normative and suboptimal phenomena, through different theoretical lenses. Why do people share information that they know might prove to be materially damaging or harmful to their reputation? Can gossiping be understood as a prosocial act, benefitting a common good? What types of information are most likely to "go viral"? This course attempts to answer these questions, and to provide students with the perspective and tools necessary to improve their own disclosure decision making.

09

### 88-300 Programming and Data Analysis for Social Scientists TR 2:00-3:20PM

This course presents an introduction to computational thinking through practice with data analysis. Students will develop extensive expertise using the statistical programming language R. Designed primarily with social science majors in mind, students will use a variety of data structures to represent information and solve problems. The course is conducted in a "flipped classroom" style, and places a heavy emphasis on hands-on programming -- in every class, students will practice writing computer programs to conduct analysis and explore social science phenomena. Students will develop skills in all facets of the data analysis pipeline, from installing and loading packages to reading-in files to data cleaning, munging, visualization and modeling. The course is primarily intended for students who have limited familiarity with coding, and assumes no previous exposure to R.

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### 88-302 Behavioral Decision Making MW 2:00-3:20PM

Behavioral decision making is the study of how people make decisions, in terms that can help them to make better decisions. It draws together research from psychology, economics, political science, and management, among other fields. It has applications that range from managing potentially hazardous technologies, to involving patients more fully in the choice of medical procedures, to the design of computer-interactive systems. The course covers behavioral theories of probabilistic inference, intuitive prediction, preference, and decision making. Topics include heuristics and biases in inference and prediction, risk perceptions and attitudes, strategies for combining information from different sources and dealing with conflicting objectives, and the roles of group and emotional processes in decision making. The course emphasizes the relationship between theory and application.

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### 88-308 Human and Machine Decisions from Experience MW 11:00-12:20PM

This course investigates the similarities and differences between human and machine cognition in the context of decisions from experience. Students will attain first-hand experience implementing psychological models of human cognition, as well as computational methods that have applications in cognitive science and machine learning. Programming assignments will be completed in the python programming language, previous experience with python is helpful but not required. A final project will afford students the opportunity to propose novel research, design their own learning model, or review and evaluate existing research. Topics include human and machine decision making based on utility, learning from experience, heuristics and biases, applications of cognitive models, cognitive neuroscience, and mathematical theories of decision making.

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### 88-312 Decision Models and Games MW 3:30-4:50PM

Humans often make decisions in changing and uncertain situations. While challenging, humans are an adaptable species. We plan and re-adjust our plans to changing conditions, we keep aware of potentially new courses of action; and we manage our limited time, information, and attention to changing environments. How do humans make decisions in dynamic situations? This course will explore human decision making as a dynamic process resulting from human interactions with the environment. The course uses decision games to illustrate how humans learn and adapt to changing conditions of choice, and computational models to simulate decision processes and environmental dynamics. Decision Models and Games will provide: (1) foundational perspectives for using models to represent the dynamics of environments and human decision processes; (2) tools to build computational models of human decision making and of dynamic environments; and (3) practical illustrations of how models and games can be used to understand and generate solutions to a wide range of decision problems, from simple choices to large scale consequential decisions.

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### 88-341 Team Dynamics and Leadership TR 3:30-4:50PM

Much of the work in groups and organizations consists of communication. You communicate to get information that will be the basis of decisions, to provide a vision for the people who work for and with you, to coordinate activity, and to sell yourself and your work. The goal of this course is to identify sources of communication problems within an organization and ways to overcome them. To do this requires that we know how communication normally works, what parts are difficult, and how to fix it when it goes wrong. The focus of this course is on providing you with a broad understanding of the way communication operates within dyads, work groups, and organizations. This course is not a practicum in public speaking or writing, although you will get some experience writing, speaking and managing impressions. Rather the intent is to give you theoretical and empirical underpinnings for the communication you will undoubtedly do when you return to work. Among the topics considered are managerial communication, persuasion and conformity, self presentation and person perception, social networks. Cases and group projects give you an opportunity to apply what you've learned.

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### 88-365 Behavioral Economics and Public Policy TR 11:00-12:20PM

Economics has up to now been the social science that has been most broadly and deeply involved in public policy. With its rational choice perspective, the economic perspective has tended to favor certain types of policies namely those that enhance the efficiency of market mechanisms and lower the cost of information. In this course we will spend the first several classes reviewing the assumptions, implications for public policy and limitations of the rational choice perspective. The remainder of the course will then be devoted to examining different public policy issues, including saving, health care, crime and drug abuse, through the competing lenses of traditional and behavioral economics.

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### 88-366 Behavioral Economics of Poverty and Development TR 9:30-10:50AM

This course will introduce students to the study of economic development and poverty alleviation, with a special focus on recent insights from the intersection of psychology and economics. We will primarily focus on the health, microfinance, agriculture, and education sectors in developing countries. The course will have a methodological component largely centered on using experiments to evaluate interventions and policies that apply to households, small firms, and farms. While we will cover standard economic approaches, we will give extra attention to how a behavioral lens can help in both understanding development issues (e.g. barriers to household risk management) and in designing effective interventions (e.g. the timing of fertilizer sales).

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### 88-451 Policy Analysis Senior Project TR 3:30-5:20PM

Students in this course apply the research and analytical methods learned in their other courses to a real-world problem. Students decide how to structure the problem, divide into teams responsible for its different parts, identify and analyze relevant literature, collect data, synthesize their results, and present their conclusions in oral and written form to a review panel of individuals concerned with the problem. Faculty members help them along the way. Performance is based on students' contribution to the process and substance of the class, as observed by the faculty and by their fellow students. 1-2 such projects is offered every term. A complete list of previous topics is available from the department. Course is open only to seniors in SDS.

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## SDS Research, Independent Study and Internship Courses

**Important Notes:** Students cannot register for these courses themselves, you must consult with a SDS academic advisor. Additionally, these courses cannot count towards ANY major requirements, but CAN count towards units for graduation.

### 88-198 Research Training: Social and Decision Sciences

This course is part of a set of 100-level courses offered by Dietrich departments as independent studies for second-semester first years, and first- or second-semester sophomores. In general, these courses are designed to give students some real research experience through work on a faculty project or lab in ways that might stimulate and nurture subsequent interest in research participation. These courses are offered only as electives; i.e., they cannot be applied toward a college or major requirement, although the units do count toward graduation as elective units. Additional details are available in the Dietrich Academic Advisory Center.

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### 88-398 Independent Study

Students conduct independent academic study under the supervision of a Social & Decision Sciences faculty member. Students who wish to engage in an independent study should seek out a faculty member whose interests are appropriate to the topic. Students must also complete an "Independent Study/Research for Credit" form, available from the SDS Advisors in Porter 208A and 208G. Prerequisite: Permission of a faculty sponsor.

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### 88-399 Undergraduate Research

Students conduct research under the supervision of a Social & Decision Sciences faculty member. Students who wish to engage in research should seek out a faculty member whose interests are appropriate to the research. Students must also complete an "Independent Study/Research for Credit" form, available from the SDS Advisors in Porter 208A and 208G. Permission of a faculty sponsor is required.

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### 88-499 Advanced Undergraduate Research

Students conduct research at an advanced level under the supervision of a Social & Decision Sciences faculty member. Students who wish to engage in advanced research should seek out a faculty member whose interests are appropriate to the research. Students must also complete an "Independent Study/Research for Credit" form, available from the SDS Advisors in Porter 208A as well as 208G. Permission of a faculty sponsor is required.

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### 88-505 Undergraduate Internship

An internship is an approved and monitored work experience that can be related to an academic field of study through active reflection and specific learning goals. Students must work at least 10 hours per week for the semester at the internship. Additionally, students will also keep in regular contact with a faculty member in Social and Decision Sciences, who will assign and evaluate academic work. Internships are available for 1-9 units, depending on the type and amount of academic work produced. Students are responsible for finding their own internships and faculty sponsors, although assistance is available in the department.

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