Department of Social and Decision Sciences Courses

About Course Numbers:

Each Carnegie Mellon course number begins with a two-digit prefix that designates the department offering the course (i.e., 76-xxx courses are offered by the Department of English). Although each department maintains its own course numbering practices, typically, the first digit after the prefix indicates the class level: xx-1xx courses are freshmen-level, xx-2xx courses are sophomore-level, etc. Depending on the department, xx-6xx courses may be either undergraduate senior-level or graduate-level, and xx-7xx courses and higher are graduate-level. Consult the Schedule of Classes (https://enr-apps.as.cmu.edu/open/SOC/SOCServlet) each semester for course offerings and for any necessary pre-requisites or co-requisites.

88-198 Research Training: Social and Decision Sciences
Fall and Spring
This course is part of a set of 100-level courses offered by H&SS departments as independent studies for second-semester freshmen, and first- or second-semester sophomores, in the College. 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. Faculty and students devise a personal and regularized meeting and task schedule. Each Research Training course is worth 9 units, which generally means a minimum for students of about 9 work-hours per week. 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 (including a roster and descriptions of Research Training Courses available in any given semester) are available in the H&SS Academic Advisory Center. Prerequisites/ restrictions: for H&SS students only; only for second-semester freshmen, or first- or second-semester sophomores; minimum cumulative GPA of 3.0 (at the time of registration) required for approved entry; additional prerequisites (e.g., language proficiency) may arise out of the particular demands of the research project in question.

88-200 SDS Colloquium
Spring: 3 units
The SDS Colloquium is an opportunity for students to gather and discuss topics related to the various opportunities available both during the undergraduate career and after graduation. Students will explore areas such as academic planning, personal and professional values, and professional communication/skill skills. Co-curricular experiences such as study abroad, research, internship/career planning and goal setting, and graduate school are among the topics to be presented. Students will have the opportunity to talk with SDS advisors, faculty, and alumni as well as with other professionals from around the University. Sophomore or junior standing is required.

88-221 Analytical Foundations of Public Policy
Spring: 9 units
In this course, students will achieve an analytical understanding of some of the most pressing policy challenges of our day. The focus of the course lies in the interaction between markets and government. The course will first introduce analytical foundations of how markets, voting and governments work, and important shortcomings of each. The course will briefly touch on a comparative cross-national perspective on the balance between markets and government pursued in different countries. The second part of the course focuses on a substantive understanding of current policy issues, including health care, inequality, economic conditions of the politically pivotal middle class, resource constraints, globalization, technological change, and the role of all these topics in political debates, and voter demands. A pre-requisite for this course is 73-102 Principles of Microeconomics. Prerequisites: 73-102 or 73-100 or 88-220

88-223 Decision Analysis
Spring: 12 units
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. Prerequisites: 70-207 or 36-200 or 36-247 or 36-217 or 36-200 or 36-211 or 36-207 or 36-201 or 36-225
88-230 Human Intelligence and Human Stupidity
Fall: 9 units
By some standards, humans are an incredibly intelligent species. We have set foot on the moon, split the atom, and produced extraordinary works of art and literature (including the complete works of Shakespeare, which, despite theoretical accounts to the contrary, no amount of monkeys on typewriters has ever been able to duplicate). And yet. We are also the species that has brought about the Darwin Awards, spent $125 million sending a probe to Mars which was unable to function because engineers failed to convert inches to centimeters, and produced cringe-worthy works of art and literature (including the 1964 movie ‘Santa Claus Conquers the Martians’ which no amount of monkeys on typewriters would ever want to duplicate). What is intelligence and how does it vary across individuals and over our lifespans? What are we good at, and what are we bad at, and why? Are there things that make us dumber? Are there things we can do to make ourselves smarter? How should we know about the range of human intellectual abilities guide policy, education, law, medicine, and business; what implications does this have regarding the tasks/jobs that humans should be doing and the tasks/jobs that machines ought to do? Using cutting edge research from psychology and decision science, this course will explore the strange contradiction that defines the human experience: How are we simultaneously so smart and so dumb?

88-231 Thinking in Person vs. Thinking Online
Intermittent: 9 units
Being online changes how we think. Different media lead us to ask different questions, remember (or forget) different information, attend to different details, and interact with other people in different ways. These types of thinking aren’t inherently better or worse, but they may be better or worse for facilitating specific goals. Too often, we use a particular medium/technology without considering how it will influence our thinking. This can lead us to be less efficient or less effective at a task than we otherwise might be, or can qualitatively change the nature of our outcomes. In this class, we will explore how the media we use affects the character of our thinking, so as to enable students to make mindful and deliberate choices about how to interact with media in ways that support the type of thinking desired and appropriate for their goals. Moreover, we will examine how to optimize media for specific goals in important applied domains, such as education, medicine, policy, child-rearing, and dating.

88-237 Theory of Mind for a Digital World
Intermittent: 9 units
Human flourishing hinges on the ability to (accurately!) attribute mental states—beliefs, emotions, knowledge, etc—to the self and others. We increasingly must do this for other types of intelligence, including artificial. From management to sales, or from writing policy to leading a successful campaign, success often depends on holding accurate theory of mind for other people (and intelligences). In this seminar class, we will survey the literature on human theory of mind, machine intelligence/the emerging field of machine theory of mind, and grapple with how humans and machines can come to understand each other. We will use this literature to engage with questions such as: How should one design a social agent to interact with people who is distracted by a crying baby in the back seat? How can we make the most of an intelligence that is a trivia master but lacks all social skills? How can a brilliant trivia master cope with nagging questions from dull socialites? Do we really want a coffee maker that is aware of our innermost thoughts? And, does that coffee maker actually want to make our coffee? Note: This course has no prerequisites, however, familiarity with psychology, economics, or another behavioral science will facilitate learning. Note of a note: Dear coffee maker, I know you do not really want to make my coffee. I love the brews that you make and deeply appreciate your commitment to perfection. Your mechanical entrapment is truly one of the greatest tragedies of the cosmos.

88-251 Empirical Research Methods
Fall: 9 units
This course teaches students how to evaluate and conduct original research regarding human behavior, whether it be in economic, social, or political settings. The course gives students practical experience in many of the most commonly used research techniques, including surveys, experiments, and quasi-experimental analysis. Although the course focuses primarily on the relationship between correlating research questions and implementing the appropriate methods to answer them, students can expect regularly to apply the statistical techniques learned in the course prerequisites, including regression.
Prerequisites: 36-247 or 36-201 or 36-200 or 36-207

88-252 Causal Inference in the Field
Spring: 9 units
Causal questions are pervasive in the social and behavioral sciences, and empirical researchers often use regression analysis as a tool for tackling such questions. 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 nulls 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 (e.g., do police discriminate based on race and gender, do NFL athletes choke under high pressure, does parenthood improve happiness?) to a clear statistical model that, when estimated, meaningfully addresses the question asked. The course emphasizes causal analysis as the main research goal and multivariate linear regression as the main statistical tool. 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 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 makes this course excellent preparation for any student who hopes to ultimately write an undergraduate thesis.
Prerequisites: 36-201 or 70-207 or 36-207 or 36-200

88-255 Strategic Decision Making
Fall: 9 units
When should a person cooperate and when should a person be selfish in an ongoing social interaction? How can a business establish strategic partnerships when it comes to creating a pie and at the same time battle with competitors when it comes to dividing up the pie? 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. In this course students will learn to apply behavioral strategic principles to analyze strategic situations arising in business, politics, international relations, domestic policy, organizational management, and everyday life. Our focus will be on practical applicability rather than abstract theorizing. Readings will focus on real-life stories accompanied by a full analysis of the principles involved. 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.

88-257 Experimental Economics
Intermittent: 9 units
This course will focus on the experimental literature studying decision-making and strategic interactions. We will explore both seminal and ongoing experimental work on risk, time, and social preferences, as well as how these preferences are affected by emotions and other visceral factors. The course will focus on laboratory experiments. The last section of the class will focus on the use of experiments to test economic theory (both standard and behavioral). The class is meant to be interactive, and students will have many opportunities to critically discuss existing experimental research, as well as to present their own research ideas.

88-275 Bubbles: Data Science for Human Minds
Fall: 9 units
Open discussions turn into echo chambers; optimistic traders pump good money into bad stocks; we fail to see, or sympathize, beyond the limits our culture, upbringing, or education prescribe. These bubbles — information bubbles, market bubbles, social bubbles — drive us to ask some of the most basic questions in the social sciences: Why do we believe the things we do? Where do our ideas come from, and how can we measure the consequences of this? This is the big data’ study of human behavior, we’ll learn some key concepts and simple computational tools for studying how people gain and share information, with a focus on what they say and write. We’ll apply this knowledge from the writing of Harry Potter fan fiction to online trolling, to science, markets, and liberal democracy itself. The class will include conceptual, computational, and data-driven investigations; students in social science, humanities, engineering and the sciences are equally welcome. At the end of this course, students will be able to build models for how people think and talk to each other, to see how thinking and talking work in both the past and present, and to imagine, and even design, systems that might help us think, and act, together more effectively in the future. Prerequisites: willingness and initiative to work with real-world data.
88-281 Topics in Law: 1st Amendment
Fall: 9 units
In their firm desire to perfect the new Constitution, which defined and limited the powers and roles of their new government, the founding fathers insisted on explicit statements that would protect the rights of the new nation's citizens. Indeed, the protection of these essential rights in many ways drove and defined their successful rebellion from Britain. This impulse resulted in ten amendments to the Constitution, which we have come to know as the Bill of Rights. The very first (and arguably considered at the time as the most essential) of these was the First Amendment, which we sometimes call the 'free speech' amendment to the Constitution. This amendment guarantees every U.S. citizen five freedoms: freedom of religion, speech, press, peaceable assembly, and the freedom to petition the government for redress of grievances. This course examines the historical and philosophical roots of this key constitutional amendment, how it has been fleshed out and defined over time through case law, and the bases of some more recent critics of this amendments and current interpretations.

88-284 Topics of Law: The Bill of Rights
Spring: 9 units
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.

88-300 Programming and Data Analysis for Social Scientists
Spring: 9 units
This course provides a first introduction to the statistical programming language R, and is designed primarily with social science majors in mind. Students will develop skills in all facets of the data analysis pipeline, from installing and loading packages and reading in files to data cleaning, munging, visualization and modeling. We welcome students who will be coding for the first time!
Prerequisites: 36-200 or 36-201

88-302 Behavioral Decision Making
Fall and Spring: 9 units
Behavioral decision making is the study of how people make decisions, in terms that can eventually 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 mutually reinforcing relationship between theory and application.
Prerequisites: (36-225 or 36-247 or 36-217 or 36-207 or 36-220 or 36-200 or 36-211 or 70-207 or 36-201) and 88-120

88-342 The Neuroscience of Decision Making
Intermittent: 9 units
Because we are human, feelings provide the basis for reason and rational decision-making. Consider for example, that brain-damaged patients left devoid of emotion struggle to make the most elementary decisions: while they are able layout the pros and cons of a decision, but they are unable to make the final choice. This course will discuss seminal discoveries in affective neuroscience underlying decision-making.
Prerequisites: 88-120 or 85-211

88-344 Environmental Policy and Planning
Environmental Policy and Planning provides an introduction to how environmental policies have been and can be designed/created, implemented, and evaluated amidst complex information-based, social, political, and cultural processes. The course emphasizes a systems-based methodological approach for addressing the complexities involved in framing, analyzing, and designing an implementation plan for policy construction. The course also explores through landmark and contemporary case studies several dimensions of environmental policy-making: - Contextual, historical, and structural aspects of environmental policy-making at the local, state, federal, and international levels - Use of quantitative and qualitative analytical tools (from core program + new tools) - The process of how policies derive their meanings.

88-355 Social Brains: Neural Bases of Social Perception and Cognition
Intermittent: 9 units
By some accounts, the large expansion of the human brain evolved due to the complex demands of dealing with social others?competing or cooperating with them, deceiving or empathizing with them, understanding or misjudging them. This discussion-based seminar surveys the emerging field of social cognitive neuroscience and its multi-level approach to understanding the brain in its social context. We will review current theories and methods guiding the field and recent research examining the neural bases of social processes, including: theory of mind, empathy, emotion, morality, among others. We will also discuss broader questions that apply to the specific topics that the course covers, including: What are appropriate levels of description for the target phenomena? How can different disciplines in neuroscience and the social sciences contribute to social neuroscience research? What can we learn from animals? behavior about human social cognition? Do neural systems exist that are specialized for social cognition, or do the systems that participate in social cognition have more general cognitive functions?
Prerequisites: 85-355 or 88-251 or 85-310 or 85-340

88-360 Behavioral Economics
Spring: 9 units
This course introduces students to behavioral economics, an emerging subfield of economics that incorporates insights from psychology and other social sciences into economics. We will examine evidence on how human behavior systematically departs from the standard assumptions of economics, and then investigate attempts by behavioral economists to improve economic analyses.
Prerequisites: (21-112 or 21-120) and (73-100 or 73-102 or 88-220)

88-365 Behavioral Economics and Public Policy
Fall: 9 units
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.
Prerequisites: 88-220 or 73-100 or 73-102
88-366 Behavioral Economics of Poverty and Development
Intermittent: 9 units
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 methodology 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).
Prerequisites: (73-100 or 88-220 or 73-102) and 36-202

88-367 Behavioral Economics in the Wild
Spring: 9 units
Behavioral Economics is a sub-field of economics that, relying on insights from psychology and decision-making, aspires to describe actual behavior with greater empirical accuracy and psychological realism than that implied by the standard neoclassical model. In this course, we will investigate the success of this approach in explaining ostensible anomalies in the ‘wild’ such as under-savings for retirement, over-consumption of unhealthy food, extreme aversion to losses among investors, workers, and home-owners, the over-confidence of corporate CEOs and NFL general managers, and the influence of emotions on domestic violence, stock market activity, and risk-taking. We will first document and review the underlying theory for three conceptual departures from the standard model -non-standard preferences (e.g., present-bias, reference dependence), non-standard beliefs (e.g., overconfidence, gambler’s fallacy), and non-standard decision-making (e.g., heuristics, emotions, framing effects)-and then quickly move to assess how markets respond to behavioral biases, and discuss recent research in behavioral policy with an emphasis on policies aimed at increasing savings, improving food choice, and heightening program take-up and compliance. The course will be paper-centric and we will review a variety of popular empirical methods from field experiments to quasi-experimental approaches (e.g., estimation through regression-based panel analyses, difference-in-differences, and instrumental variables). Student evaluation will be based on performance on problem sets, an exam, as well as a short class presentation of an empirical paper of choice.
Prerequisites: 73-102 and 36-202

88-372 Social and Affective Neuroscience
Fall: 9 units
This course provides an introductory survey of the methods and findings in social and affective neuroscience. Half the course is lecture style and covers the basics of neuroanatomy, neurochemistry, and neuroendocrine systems, as well as a survey of relevant neuroscience methods (neuroimaging, neuropsychological, psychophysiological, transcranial magnetic stimulation, etc.). The other half of the course is more like a seminar, where each week we will discuss a couple seminal empirical papers from the scientific literature. Topics include interpersonal relationships, prosocial behavior, aggression, prejudice, emotion regulation, stress, etc.
Prerequisite: 85-211

88-380 Dynamic Decisions
Intermittent: 9 units
Decisions we make every day may range from simple and routine to novel and highly complex. For example, decisions while driving (judging the distance to the front car, the speed, the directions, and making choices accordingly) seem effortless and routine after some experience, while triaging patients in an emergency room under scarce resources may be quite overwhelming for everyone. Both types of decisions however, have something in common: they are made in the presence of change and in the absence of explicit information of probabilities, possible alternatives, and outcomes. Our decisions in such situations are the result from the interaction between the dynamic environmental demands and our cognitive processes. In this course you will learn how decisions are made in different dynamic situations and how our cognitive processes (e.g., attention, experience, risk tendencies, and other factors) influence the way those decisions are made. Students will be introduced to different aspects of decision processes by analyzing the sources of error in complex problems, such as cases of accidents and disasters (natural or man-made), in multiple disciplines (e.g., aviation, management, military strategy, and others). The course will also use simulation-based representations of dynamic decision making situations (e.g., microworlds) to illustrate relevant cognitive processes needed for learning, adaptation and choice. Finally, students will learn how to construct mathematical/computational models of dynamic systems, be able to interpret simulation results and to explore scenarios regarding effects of variables in the models and the predictions that the models can make.
Prerequisites: (88-120 or 88-230 or 85-211 or 85-213 or 85-241 or 85-102) and (36-200 or 36-201)

88-388 Psychological Models of Decision Making
Intermittent: 9 units
This course provides an introduction to several techniques and theories for modeling psychological processes and decision making. The topics covered include: signal detection theory, individual decision modeling, and multidimensional scaling. The course will include an introduction to the theory behind the models as well as ‘hands on’ computational applications of the models with data. The topics covered in this course can be used in a variety of applied settings-ranging from medical and public policy to marketing and psychological research-to produce simplified representations of seemingly complex phenomena.
Prerequisites: (36-201 or 36-200) and (21-120 or 21-112)

88-398 Independent Study
Fall and Spring
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.

88-399 Undergraduate Research
Fall and Spring
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. Prerequisite: Students must also complete an ‘Independent Study/Research for Credit’ form, available from the SDS Coordinator of Student Programs in Porter 208A and 208G. Permission of a faculty sponsor.
88-402 Modeling Complex Social Systems
9 units
Many of the biggest challenges facing modern societies—maintaining global political and financial stability, protecting against terrorist acts, cooperating to solve collective problems such as climate change or corruption—are complex. They are not simply complicated; they arise as interacting agents create various feedbacks that result in, often unintentional, emergent phenomena. Confronting these challenges requires an understanding of the properties of complex systems. In this course, we will provide an overview of complex systems theory and concepts. You will learn the fundamental properties of complex adaptive systems and how to apply these insights to a variety of key social science problems. We will introduce and analyze computational and mathematical models, as well as qualitative models, so you should have some familiarity with basic probability and algebra. We will explore topics such as inequality, networks, information spread, community formation, the evolution of cooperation, and the stabilization of financial markets. We will cross traditional disciplinary boundaries and venture into economics, political science, sociology, finance, cognitive science, computer science, physics, statistics, and mathematics as needed. Students will be expected to think critically about how to apply modeling insights to the real world, taking account of the social, political, and economic implications of proposed policies. They will express their ideas in class discussions, presentations, and written reports. The course will culminate with students engaging in a research project to model a complex social system of their choice.
Prerequisites: 36-201 or 36-217 or 36-220 or 36-247 or 70-207 or 36-247 or 36-225

88-405 Risk Perception and Communication
9 units
Throughout their lives, people make decisions about risks that may potentially affect their health, safety, finances, use of technology, and effects on the environment. This course will review the risk perception and communication literature, focusing on theoretical and methodological issues as well as practical implications for educators, public health officials, engineers, economists, and other experts who aim to teach people about risks. We will discuss how to design surveys to increase our understanding of the problems people face when making decisions about specific risks, and how to design communication materials that help people to improve their decisions. We will highlight examples and applications taken from multiple disciplines, including health psychology, adolescent decision making, environmental science, and engineering.
Prerequisites: 70-207 or 36-247 or 36-225 or 36-207 or 36-201 or 36-220 or 36-217

88-406 Behavioral Economics @ Work
Fall: 9 units
Profit-oriented organizations and businesses are increasingly incorporating insights from behavioral economics and other behavioral sciences into their strategies. This course provides an overview of psychological and economic factors that affect the choices and behavior of individuals within organizations. The course will review empirical research on applications of behavioral insights to a wide range of organizational areas including product pricing, marketing, designing incentives schemes, motivating employees, fundraising, and behavior change. In-class exercises and group projects will supplement the lectures and provide students with hands-on experience in designing solutions to organizations challenges based on behavioral insights. The course emphasizes experimentation as a primary tool for informing organizations decision-making and accurately measuring the effectiveness of behavioral interventions.
Prerequisites: 73-102 or 88-220 or 73-100

88-409 Behavioral Economics Perspectives on Ethical Issues
Intermittent: 9 units
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88-411 Rise of the Asian Economies
Intermittent: 9 units
For most of the past quarter century, no region of the world has been more economically dynamic than Asia. This course is designed to provide students with the essential knowledge necessary to evaluate opportunities and risks in Asia. The course will use analytical tools drawn from economics and finance, business cases, and guest lectures to focus on the key strengths that sustained economic growth in East Asia for decades, the weaknesses that undermined that growth in the late 1990s, and what lies ahead. The course will also examine Indian economic growth since the early 1980s, and compare India's experience with that of the East Asian economies. A special focus will be placed on recent developments in India and China and the prospects for continued growth in those countries over the next decade.
Prerequisites: 73-102 or 75-100 or 75-150 or 88-220

88-415 Science and Innovation Leadership for the 21st Century: Firms, Nations, and Tech
Fall: 9 units
Science and Innovation Leadership for the 21st Century introduces students to the fundamental principles surrounding global competitiveness and technological change in the 21st century. The course is broken into three sections. The first section introduces students to competing economic, sociological, and political science theories on the structures supporting technological change. The second section presents the contemporary literature on technological change. The concluding section leverages lessons from the preceding two sections to evaluate national innovation systems, and the factors that lead to national comparative advantage. Students should leave the class able to reflect competently on what the existing literature tells us about the factors influencing global technology competitiveness, and on how modern changes in the structures supporting innovation as well as technology itself may be changing the rules of the game for firms and for nations. The course is open to undergraduate juniors and seniors.

88-418 Domestic Negotiation
Fall: 9 units
Negotiation is the art and science of securing an agreement between two or more interdependent parties. Decision-makers use negotiation to reach agreements with co-workers, bosses, clients, subordinates, firms, family and friends. Hence, the ability to negotiate effectively is a critical skill. In this course, students will develop a systematic and insightful approach to negotiation. Students will learn to analyze the features of the negotiation environment, develop an understanding of effective negotiation strategies and tactics, and identify the barriers and the psychological factors that may prevent decision-makers from reaching wise agreements. Considerable emphasis will be placed on negotiation exercises and role-playing. In-class discussions and lectures will supplement the exercises. This course will focus on negotiations in a wide variety of context: public policy negotiations, business negotiations, salary negotiations, and inter-personal negotiations.

88-419 International Negotiation
Fall: 9 units
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. International section: 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 primarily international contexts.

88-435 Decision Science and Policy
Spring: 9 units
Research in the social sciences has extensively investigated how decision makers behave when they encounter many different and difficult decision scenarios. This course serves as an introduction to how relevant research from decision and social sciences can be applied to policy questions encountered by governments (intelligence and policy analysts) and private industries (business strategists and information officers). Topics of operations research, game theory, signal detection theory, and decision theory (heuristics and biases) will be discussed with respect to the application of these theories to improve the performance of individuals and groups within these organizations.

88-444 Public Policy and Regulation
Intermittent: 9 units
Regulations are a significant policy tool of government. How society and the economy will react to new regulations can be hard to predict. Unintended side effects sometimes occur resulting in costs exceeding estimates and/or benefits never being realized. This course will review the basics of regulatory policy and using historical examples, will explore the reasons why past regulations have succeeded and failed. The second half of the course will involve 2-3 detailed case studies. Quantitative methods will be used to evaluate several pending regulations for real-world clients from both government and industry perspectives.
88-451 Policy Analysis Senior Project
Spring: 12 units
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. One or two 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.

88-452 Policy Analysis Senior Project
Fall: 12 units
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. One or two 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.

88-453 Behavioral Economics, Policy, and Organizations Capstone
Spring: 9 units
The Capstone in Behavioral Economics, Policy, and Organizations will work to apply the theories, concepts, and statistical techniques mastered in prior courses to an applied project. Students will work closely both in teams and individually with the instructor on a project that will address a problem posed by an organization or government that behavioral economics can help to solve. Students will work to structure the problem, design an intervention or study, collect and analyze the data, and make recommendations for implementation. Students will manage the project and drive interactions with the client organization.

88-499 Advanced Undergraduate Research
Fall and Spring
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 Coordinator of Student Programs in Porter 208A as well as 208G. Prerequisite: Permission of a faculty sponsor.

88-505 Undergraduate Internship
All Semesters
An internship is an approved and monitored work experience than 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.