Public Policy and Political Economy

**PPPE 6301** Political-Economic Theories (3 semester credit hours) How can long-dead Adam Smith help us explain sex-trafficking of Thai women to Japan? What insights can Karl Marx provide for explaining the Financial Crisis of 2008? What can Schumpeter teach us about today's monopolies in the Mexican Telecom Industry? This seminar provides a grand overview of the "big thinkers" in political economy - from Malthus and Ricardo, to Keynes, Freeman and Lucas Jr. as well as Olson, Gerschenkron, and Polanyi, and many more. In addition to introducing these "old" theories, their relevance to current times are explored using case studies of real world scenarios. (3-0) Y

**PPPE 6310** Research Design I (3 semester credit hours) This course is the first in a two-course sequence devoted to the research enterprise and the study of data development strategies and techniques to facilitate effective statistical analysis. Topics generally covered include: (1) issues and techniques in social science research with emphasis on philosophy of sciences, theory testing, and hypothesis formulation; (2) measurement and data collection strategies, reliability and validity of measures and results, sampling, surveys; and (3) examination of qualitative versus quantitative research techniques, working with observational data, field research issues, and triangulation. (3-0) Y

**PPPE 6312 (SOC 6312)** Social-Economic Theories (3 semester credit hours) A critical analysis of early and modern social and economic theories. Select classical works of Smith, Marx, and Weber are explored, as they pertain to Western capitalist development, along with more contemporary perspectives related to the accumulation and exchange value of human, social and cultural capital. Emphasis is placed on understanding how social relations and social institutions influence economic exchanges. (3-0) T

**PPPE 6313** Human Organizations and Social Theory (3 semester credit hours) This is a course in empirical social theory as described in Human Organizations and Social Theory. The theory can be characterized as empirical-formal. The theory recognizes that human societies are inherently pluralistic. They are organized with several distinct kinds of cultural phenomena: language, social idea systems, technical idea systems, organizational charters, and institutions. These are used to produce organizations. Organizations produce the society's adaptation. The adaptation, if successful, preserves the cultural systems. The course reviews the methods for eliciting these cultural systems as well as the types of formal analysis needed to describe them and their uses. (3-0) T

**PPPE 6319** Political Economy of MNCs (3 semester credit hours) The Political Economy of Multinational Corporations will approach the rise of international firms and their behavior from a social scientific approach, utilizing research in economics, political science, and other disciplines. In addition to the historical rise of international firms, the course covers the economic theory of the firm, MNCs as political actors, the dynamics of foreign direct investment, and the relationship of MNCs to developing countries. The aim of the course is to understand the causes and effects of the behavior of transnational corporations, particularly in regard to economic policy. (3-0) R

**PPPE 6321** Economics for Public Policy (3 semester credit hours) Introduces students to the use of economic methods of the analysis of public policy. The primary theoretical framework for the course is microeconomics, but the course may include macroeconomics at the discretion of the instructor. A variety
of public policy topics are covered including education, employment and the labor market, taxes and redistribution, access to health care, poverty and inequality, and public assistance programs. (3-0) S

**PPPE 6329** Ethics, Culture, and Public Policy (3 semester credit hours) This course considers the principal schools of ethical thought in the world’s major cultural traditions and their implications for law and public policy. Topics to be considered include tensions between personal and collective interests, the conflict between democratic and authoritarian theories and systems of law and government, the relation between morality and law, the way law itself differs in different cultural regions, and the ethical role of institutions such as the family, government, business, religion, and interest groups. (3-0) Y

**PPPE 6334 (GISC 6334)** Workshop in Environmental and Health GIS/Policy (3 semester credit hours) Students join a faculty member in a research project on environmental and health policy. Specific topics vary from semester to semester, but special emphasis will be on the applications of statistical and spatial analytic methods (e.g. GIS, spatial econometrics, decision analysis, etc.) to various real-life data in the environmental and health field. Class exercises will be completed using state-of-the-art statistics and GIS software. May be repeated for credit as topics vary (9 semester credit hours maximum). Prerequisite: EPPS 6313 or EPPS 7313 or GISC 6301 or GISC 6381. (3-0) Y

**PPPE 6335 (PSCI 6335)** Institutions and Development (3 semester credit hours) An overview of leading theories, institutional perspectives, issues and policy debates concerning urban, regional, national and global development. Topics may include economic growth, technology and innovation, shifts in industrial structure, spatially imbalanced change, and their welfare consequences. (3-0) T

**PPPE 6338 (PSCI 6338)** Politics and Policy in China (3 semester credit hours) This course introduces the political and policy processes in China with a focus on economic reform and development. It will give comprehensive coverage of the political system in China under the Chinese Communist Party (CCP) and how policy making processes evolve from a soviet style to market reform to state-market collaborations in many policy areas. The party-state system permeates every level of the policy process from central government to local agencies. Cases include one child policy, minority policy (Uyghurs and Tibet), foreign affairs regarding Hong Kong, Macau and Taiwan, housing policy, fiscal and monetary policies, and bilateral relations with the United States. This course engages each student in reading, discussions, and formulating research ideas via collaborative projects. At end of course, students will coauthor with group members a policy-related research report specializing in one policy area. (3-0) R

**PPPE 6340 (SOC 6340)** Domestic Social Policy (3 semester credit hours) Overview of governmental and non-governmental programs, policies, and institutions dealing with those who cannot function self-sufficiently within the American market economy, including low-income families, the elderly, the unemployed, and people with disabilities. Analyzes how social policy in the United States reflects the political economy and culture, as well as social and demographic trends. (3-0) Y

**PPPE 6341 (SOC 6357)** Health Policy (3 semester credit hours) The history and political economy of the U.S. health care system and a review of major governmental programs to expand access to appropriate services, control rising costs, ensure the quality of care, and promote health through prevention. Analysis of current and recent proposals for reform of health care policy. (3-0) R

**PPPE 6342** Research Design II (3 semester credit hours) This course is the second in a two-course sequence devoted to the study of data development strategies and techniques to facilitate effective statistical
analysis. Topics generally covered include: the logic of causal inquiry and inference in the social sciences, the elaboration paradigm and model specification, anticipating and handling threats to internal validity, hierarchies of design structure (experimental, quasi-experimental and non-experimental); linking design structure to effect estimation strategies and analyzing design elements in published literature. Students will be required to select a research topic in consultation with the instructor and prepare a written comparative design analysis. **PPPE 6310** and (**EPPS 6313** or **EPPS 7313**) are recommended. Instructor consent required. (3-0) Y

**PPPE 6343** Global Health Policy (3 semester credit hours) This introductory but interdisciplinary course examines contemporary issues in global health policy and practices. This course helps students understand various social, economic, political and environmental determinants of health and considers evidence that inequalities in education, income and accessibility to resources influence health status. Students will develop skills in cost-effectiveness analysis, health outcome measurement and spatial analysis, using a variety of contemporary global health case studies that focus on content areas such as maternal and child health, environmental health, infectious diseases (HIV/AIDS, malaria, diarrheal diseases, etc.) and global healthcare delivery. Emphasis is placed on issues of global health inequality at various levels, exploring the nature and extent of global inequalities in health and the possible policy responses to reducing global health disparities. (3-0) T

**PPPE 6347** (PSCI 6347) Proseminar in Political Institutions and American Politics (3 semester credit hours) Surveys the scholarly literature on major institutions associated with policymaking in the United States, including Congress, the Presidency, the bureaucracy, and interest groups. (3-0) Y

**PPPE 6350** (SOC 6350) Social Stratification (3 semester credit hours) This seminar will examine the major theories and lines of research on social stratification, defined as the hierarchical ranking of groups based on the unequal distribution of societal resources and positions. Focusing primarily on the U.S. class system, topics covered include: class reproduction and mobility, the educational system and policy, empirical definitions, the implications of race and gender for social class, and forms of legitimation. (3-0) Y

**PPPE 6351** (PSCI 6351) Politics of East Asia (3 semester credit hours) This is a survey course to prepare students from multiple disciplines to comprehend, study, and connect with the Asian world. Specifically, this course focuses on China, Taiwan, Japan, Hong Kong, Macau, North Korea, and South Korea, with emphasis on the role of the United States. It examines and compares the politics of the Asia nations in their political institutions, actors, and issues. The students will study extensively the history, political geography, political economy, development, and democratization of the countries in the region. (3-0) R

**PPPE 6352** (ECON 6352) World Political Economy (3 semester credit hours) An overview of the major economic, social, political, and cultural forces that influence the nature of the international economic and political environment, as well as global economic and political relations. Topics include: theories of global political economy; globalization and economic trade, economic and political transformation in Eastern Europe, China, and the former Soviet Union; democratization and development in the less developed countries; military and non-military approaches to national and international security; environmentally sustainable economic development; and the international implications of technological failure. (3-0) T

**PPPE 6353** (ECON 6362) Industry, Technology, and Science Policy (3 semester credit hours) Focuses on the bi-directional relationship between science/technology and societal conditions, with special attention to industrial and other economic factors. Topics include the role of scientists and engineers in industrial
competitiveness and economic well-being; the impact of market structure on the nature and pace of technological development; appropriate technology and sustainable economic development; and the nature and policy implications of the intersection of increasingly powerful technologies with human error and criminal or terrorist behavior. (3-0) Y

PPPE 6354 Theories and Issues of Development (3 semester credit hours) In approaching development, there is an important interaction between theories and issues, each to some extent defining the other. This course will review a number of prominent instances in which we see this interaction - where theory has shaped the way people defined and approached practical problems and also where pressing practical problems have sometimes demanded new theoretical developments. Specific theories and issues discussed vary. Possible theories of interest include arguments for and against slavery, mercantilism, the idea of economic “takeoff,” central planning versus pluralism, and the role of democracy and human rights. Issues include labor conditions, urban living conditions, population growth and population quality, environmental pollution and sustainability, and governmental ineffectiveness and corruption. (3-0) Y

PPPE 6355 Political Economy of the Middle East (3 semester credit hours) Analysis of the interplay of cultures and conflicts in the Middle East. The course will examine ancient cultures, Islam and the Ottoman Empire, the Arab-Israeli conflict, the rise of the Oil Kingdoms, the Kurds, the Gulf wars, and terrorism in the name of Islam. The course will also focus on U.S. relations with a number of Middle Eastern countries such as Saudi Arabia, Iran, Iraq, Egypt, and Israel. (3-0) R

PPPE 6356 (SOC 6356) Health and Illness (3 semester credit hours) A review of medical sociology and related fields, including social epidemiology and the social demography of health and illness; health and illness behavior; health institutions and professions; economic factors and trends in health care; and health policies and programs. (3-0) R

PPPE 6357 (PSCI 6357) Political Economy of Latin America (3 semester credit hours) Addresses historical and contemporary issues in Latin American political economy. Uses case studies and cross-regional comparisons to assess competing explanations. Analyzes the current political and economic situation facing Latin America in its quest for economic growth and development. The emphasis is to understand the broad patterns of development and change in the region and the physical, historical, social and economic constraints which have affected development, broadly understood. (3-0) R

PPPE 6358 Political Economy of South and Southeast Asia (3 semester credit hours) Political Economy of South and Southeast Asia. South Asia is the Indian peninsula. Southeast Asia is the great swath of countries from Burma and Thailand through Malaysia to Indonesia and Australia. This is a region of great cultural, political, economic, religious, and historical diversity. This course surveys the political economy of the region by selectively examining key countries and their mutual interactions. The major countries, all of which are rising military and economic powers, are Pakistan, India, Thailand, Indonesia, and Australia. Additional countries, which will be included according to interest and available material, include Sri Lanka, Nepal, Bhutan, Bangladesh, Burma, Cambodia, Vietnam, Malaysia, Singapore, Papua New Guinea, East Timor, and New Zealand. (3-0) R

PPPE 6359 Political Economy of Economic Development (3 semester credit hours) Examines the interactions between markets and the state from a comparative and public policy perspective. Special emphasis will be placed on issues involving industry regulation/deregulation, antitrust/competition, innovation/industrial policy, infrastructure investment, intellectual property, social regulation, and global
trade/investment. (3-0) Y

**PPPE 6361 (PSCI 6361)** Civil Conflict (3 semester credit hours) This course examines the range of contentious politics within states and the breakdown of political order. Topics include protests, riots, terrorist campaigns, insurgencies, and civil war. Students will develop an understanding of multiple theoretical perspectives and empirical approaches to the study of civil conflict. (3-0) T

**PPPE 6362 (PSCI 6362)** Political Development (3 semester credit hours) This course will survey different perspectives and theories of political development. Topics covered include the role of the state, democratization, political stability, civil society and environmental concerns, among others. (3-0) R

**PPPE 6363 (PSCI 6363)** Conflict and Development (3 semester credit hours) This module will explore the nexus between violent intrastate conflict and development. It will examine some of the key conceptual frameworks advanced to understand conflict and will explore specific themes that have occupied researchers and policy practitioners in recent years. In addition to assessing the economic costs of the conflicts, this course will also examine the traditional factors that have been purported to explain the prevalence of insurgency. (3-0) R

**PPPE 6364 (ECON 6351)** Development Economics (3 semester credit hours) An overview of theories of national economic growth and development in the context of developing countries. This includes macroeconomic models; the role of financial development, trade, and agriculture; domestic sectoral policy; human resource development; the environment; and poverty. (3-0) R

**PPPE 6365** The Innovation Economy (3 semester credit hours) Examines the role of innovation as the cause and consequence of economic transformation and performance in domestic and global contexts. Focus will be on innovation as an emergent dynamic and the institutional and legal-regulatory influences that shape it. (3-0) T

**PPPE 6366** Law and Development (3 semester credit hours) Scholars, politicians, administrators, and the educated public in general increasingly recognize that long-term societal development must come from within a country or region. It must be "organic." Organic growth, in turn, depends on establishing an effective, responsible government, rule of law, and effective economic regulation. Moreover, this legal regime cannot be merely national; it must be international. This course reviews the experiences that lie behind this realization, the issues and organizations it involves, and the steps being taken to implement it all international and national levels. (3-0) T

**PPPE 6367** Environmental Economics and Policy (3 semester credit hours) The purpose of this course is to identify various local and global environmental problems and to utilize the major analytical tools to address complex environmental management issues, particularly their impact on human health. Emphasis is placed on the use of economic tools for modeling environmental problems and their policy and management solutions. Students will be exposed to principles of microeconomic fundamentals (market models, benefit-cost analysis, etc.) and the major concepts of public goods and externality theory, which are applied to a variety of traditional and contemporary cases of environmental management and policy. Students will review and discuss scholarly research articles in the area of six major environmental research topics, such as (1) indoor air quality management, (2) outdoor air quality management, (3) water quality management, (4) hazardous solid waste management, (5) pesticides and toxic chemical management, and (6) climate change and global sustainable development. (3-0) T

https://catalog.utdallas.edu/2018/graduate/courses/pppe
**PPPE 6368** Political Economy of Finance (3 semester credit hours) Why are some currencies the target of speculative attacks while others remain unharmed? Why was Malaysia able to deal with the East Asian financial crisis, while Korea and Thailand were not? Why did Argentina default on its debt while Brazil did not, even though it had the higher debt burden? This course provides answers to these questions by analyzing the interplay between politics and finance. The first section of the course deals with the differences in corporate governance: the configuration of the domestic financial sector differs across countries, with implications for the way stock markets and banks are operating. The second section analyzes how politics affects exchange rates and capital mobility. The third and final section of the course investigates sovereign debt and lending. This course aims to provide students with the ability to analyze a two-way relationship: how politics affects finance as well as how finance shapes politics. (3-0) T

**PPPE 6369** National and International Security Strategies and Policies (3 semester credit hours) With the end of the decades-long Cold War, the US has become the world's only superpower. But the problem of national and international security continue to be a dominant concern of national and international political and economic life, just as it has been for more than sixty years. Many nations continue to maintain high levels of military expenditure as a mainstay of their security policy. Yet, there has been a profound change in the nature of the threats to security since the Cold War. Some, like the threat of intentional full-scale global nuclear war, have receded. Others, like the threat posed by nuclear proliferation and the terrorism of mass destruction, have increased. From acute hot spots to longer-term questions of restructuring power and security arrangements in a post-Cold War world, understanding the deeper issues of national and international security is critical to understanding what lies behind the headlines -- and what strategies are likely to be effective in achieving real security. Topics include: the nature and meaning of security; security and military force; terrorism, accidents and accidental war; nuclear proliferation; the international arms trade; the experience of war; the economics of security policy; social and psychological factors; and strategies for achieving security by nonmilitary means. (3-0) T

**PPPE 6370** Political Economy of Natural Resources (3 semester credit hours) Does oil undermines democracy? Why do natural resources have a positive effect on growth in Botswana but a negative impact in Nigeria? Is there a relationship between natural resources and (civil) war? This course explores the politics of natural resources in both industrialized and developing countries. We analyze the effect of natural resources on a variety of economic and political issues, including growth, macroeconomic stability, corruption, civil war, women's rights, and democracy. During this process, we also focus on how political institutions and economic conditions shape the effect of natural resources. This allows us to understand why natural resources may have positive effects in some instances, but a negative in others. (3-0) T

**PPPE 6371** Urban Development (3 semester credit hours) Explores emergence and expansion of social, political and economic forces that drive urbanization, city growth and decline, and spatial patterns of development at global, national and metropolitan scale. Focus is on understanding nature of urban development challenges around the world and on developing public and private sector interventions to address them, including those that target poverty, education, employment, shelter, transportation, land use, economic development, governance and environmental sustainability. (3-0) T

**PPPE 6372** Faith, Ideology, and Development (3 semester credit hours) Connections between names or unnamed religions and socioeconomic progress have been subject to considerable speculation, early on by Livy, Tacitus, Aquinas, and Machiavelli, and then by Sombart and Weber. Although assertions about links between faith and development are weaker today, suspicion remains that religion can and does influence
growth through a variety of means. This course explores several of these mechanisms, including education, health, social capital formation, wealth accumulation, and public policy influence. (3-0) T

**PPPE 6373** Issues in Science, Technology and Society (3 semester credit hours) This course explores a number of topics related to the roles of science in society and the relationship between science, technology and society. Topics include epistemological issues having to do with the conduct of scientific research, the role of scientific objectivity and the challenges to scientific objectivity posed by politics and postmodernist influences on the scientific enterprise. The course also explores the impact of technological advances upon society in areas such as biotechnology, information technology and computing, and artificial intelligence, and nanotechnology and robotics, and what kind of policy responses, if any, to these new technologies, are appropriate. The ethical dimensions posed by the increased role of science and technology in the twenty-first century will be an important theme of the course. (3-0) T

**PPPE 6374 (PSCI 6374)** U.S. Global Security and Public Opinion (3 semester credit hours) This course focuses on description, explanation and assessment of the sources, distribution, dynamics and consequences of public opinion about economic, political and social security events involving the United States and other countries. Emphasis is placed on how these events and leaders choices about them, including but not limited to economic crisis, poverty, social conflict, terrorism and war, affect public opinion; on how public opinion affects choices and events; and on how survey research can advance description, explanation and assessment of these effects. (3-0) T

**PPPE 6377** Political Economy of Africa (3 semester credit hours) Review of political and economic change in Africa, mainly south of the Sahara, from the late nineteenth century onward. The course explores interactions between governance mechanisms and economic growth, focusing on influences of colonization, independent authoritarian and democratic rule, and experimentation with socialist and capitalist modes of development. Contemporary themes taken up include poverty reduction, migration and remittances, economic modernization and diversification, conflict, public sector debt, foreign aid, and re-colonization by emerging and other economies. (3-0) R

**PPPE 6379** Special Topics in Development Studies (3 semester credit hours) May be repeated as topics vary (9 semester credit hours maximum). (3-0) R

**PPPE 6391** The Political Economy of Technology and Innovation (3 semester credit hours) An exploration of the relationships among technological advances, markets, and societal contexts, drawing on the social sciences (especially economics and sociology), engineering, and management. The economic impacts of both established and emerging technologies on firms and industries (profit and productivity), the macroeconomy, and society (employment and earnings). Special emphasis will be devoted to how advanced technologies transform both the work of - and work in - industries throughout the economy, even as they blur the distinctions among them. (3-0) T

**PPPE 6392** Practice of International Development (3 semester credit hours) This course focuses on the management of international development processes, including the role of context in development, various conceptualizations of poverty, development actors and institutions, and the challenges of development interventions in difficult environments. (3-0) T

**PPPE 6V81** Special Topics in Political Economy (1-9 semester credit hours) May be repeated for credit as topics vary. ([1-9]-0) S
**PPPE 6V91** Evaluation Research (3-6 semester credit hours) Individual or group project in evaluation research performed for a public or private community organization under faculty supervision. Students will normally enroll in this course for two consecutive semesters. The first semester of enrollment will culminate in the completion of a formal evaluation research proposal; the second will end with a final research report based on conclusions of the proposed research. Pass/Fail only. May be repeated for credit (6 semester credit hours maximum). Program Coordinator consent required. ([3-6]-0) R

**PPPE 6V98** Masters Thesis (3-9 semester credit hours) Provides faculty supervision of a student's masters thesis research. May be repeated for credit (9 semester credit hours maximum). Department consent required. ([3-9]-0) S

**PPPE 7313 (PSCI 7313)** Counterterrorism and Counterinsurgency (3 semester credit hours) In this discussion-based seminar, we will examine the different policy responses to terrorism and insurgency. Additionally, we will discuss issues of policing and efforts to prevent radicalization. We will explore different approaches (quantitative, qualitative, and formal) and will take advantage of literature from multiple disciplines. (3-0) R

**PPPE 7319 (ECON 6336)** Economics of Education (3 semester credit hours) This seminar examines theoretical and empirical writings relating to educational policy. The issues considered will include the link between educational achievement and earnings, the role of early childhood, assessments of head start and pre-school programs, the effectiveness of compensatory education and tutoring programs, the large and persistent achievement gap between children from minority and low-income families and those from middle-income Asian and white families, a critical examination of educational production functions, the extent and consequences of school segregation, bilingual education programs, special education programs, international comparisons of student achievement and schools, school finance and an examination of various school reform proposals. (3-0) R

**PPPE 7329** Special Topics in Industry and Public Policy (3 semester credit hours) May be repeated for credit as topics vary (9 semester credit hours maximum). (3-0) R

**PPPE 7359** Special Topics in Policy Methods (3 semester credit hours) May be repeated for credit as topics vary (9 semester credit hours maximum). (3-0) R

**PPPE 7V26** Policy Research Workshop in Institutions and Processes (3-9 semester credit hours) Students join a faculty member in a group research project on the political economy of public policy decisions in the context of institutional settings, such as legislatures, executive or administrative agencies, courts, or metropolitan systems. May be repeated for credit (9 semester credit hours maximum). ([3-9]-0) R

**PPPE 7V47** Policy Research Workshop in Health Care Policy (3-9 semester credit hours) Students join a faculty member in a group research project. May be repeated for credit (9 semester credit hours maximum). ([3-9]-0) R

**PPPE 7V62** Policy Research Workshop in Social Policy (3-9 semester credit hours) Students join a faculty member in a group research project. May be repeated for credit (9 semester credit hours maximum). ([3-9]-0) R

**PPPE 7V64** Policy Research Workshop in Poverty Research and Policy (3-9 semester credit hours) Students join a faculty member in a group research project. May be repeated for credit (9 semester credit hours maximum). ([3-9]-0) R
Policy Research Workshop in Development Studies (3-9 semester credit hours) Students join a faculty member in a group research project. Topics vary from semester to semester. However, students may substitute an individual Field Research Project for this workshop; the project must be approved by the faculty of the School of Economic, Political and Policy Sciences. May be repeated for credit as topics vary (9 semester credit hours maximum). ([3-9]-0) R

Research Workshop in Science and Technology Policy (1-6 semester credit hours) This workshop will provide the student with an opportunity to pursue individual and small group research under the supervision of the instructor into various policy-related dimensions of contemporary scientific research and technological advances such as biotechnology, nanotechnology, artificial intelligence and other contemporary advances, and the impact of scientific and technological advances on culture, economy and political institutions. May be repeated for credit (6 semester credit hours maximum). Instructor consent required. ([1-6]-0) T

Dissertation Seminar (3 semester credit hours) For students preparing proposals or writing dissertations. Pass/Fail only. May be repeated for credit. Prerequisites: Successful completion of qualifying examination and instructor consent required. (3-0) S

Independent Study (1-9 semester credit hours) Provides faculty supervision for student's individual study of a topic agreed upon by the student and the faculty supervisor. Pass/Fail only. May be repeated for credit. Instructor consent required. ([1-9]-0) R

Internship (1-9 semester credit hours) Provides faculty supervision for a student's internship. Internships must be related to the student's coursework. Pass/Fail only. May be repeated for credit. Instructor consent required. ([1-9]-0) S

Dissertation (1-9 semester credit hours) Provides faculty supervision of a student's dissertation research. Pass/Fail only. May be repeated for credit. Prerequisites: Open to PhD students only and instructor consent required. ([1-9]-0) S