

Competency 1	Competency 2	Course Title	Course Number	Instructors	Course description from courses.yale.edu/
Biological & Environmental Influences on Health		Biotechnology and the Developing World	BENG 405 Same As: ENAS 805, section 01 Same As: EVST 415, section 01	Anjelica Gonzalez	Study of technological advances that have global health applications. Ways in which biotechnology has enhanced quality of life in the developing world. The challenges of implementing relevant technologies in resource-limited environments, including technical, practical, social, and ethical aspects. Prerequisite: MCDB 120, or BIOL 101 and 102.
Biological & Environmental Influences on Health		Evolutionary Biology	E&EB 225 Same As: E&EB 525, section 01	Paul Turner Martha Munoz	An overview of evolutionary biology as the discipline uniting all of the life sciences. Reading and discussion of scientific papers to explore the dynamic aspects of evolutionary biology. Principles of population genetics, paleontology, and systematics; application of evolutionary thinking in disciplines such as developmental biology, ecology, microbiology, molecular biology, and human medicine.
Biological & Environmental Influences on Health		Biology of Reproduction	MCDB 250	Hugh Taylor Seth Guller	Introduction to reproductive biology, with emphasis on human reproduction. Development and hormonal regulation of reproductive systems; sexuality, fertilization, and pregnancy; modern diagnosis and treatment of reproductive and developmental disorders; social and ethical issues. BIOL 101, 102, and 103, or equivalent performance on the corresponding biological sciences placement examinations, or a score of 5 on the Advanced Placement test in Biology, or a score of 710 or above on the SAT Biology M test
Biological & Environmental Influences on Health		Microbiology	MCDB 290 Section 01, CRN 21264	John Wertz Murat Acar	Cell structure of bacteria, bacterial genetics, microbial evolution and diversity, bacterial development, microbial interaction, chemotaxis and motility, gene regulation, microbial genomics and proteomics, CRISPR, metabolism, infectious diseases, mechanisms of pathogenesis, host defense systems, viruses, gut microbiota in health and disease. Prerequisites: BIOL 101, 102, and 103, or equivalent performance on the corresponding biological sciences placement examinations; or one term of biochemistry, or cell biology, or genetics; or with permission of instructor.
Biological & Environmental Influences on Health	Historical Approaches	Climate Change, Societal Collapse, and Resilience	EVST 473 Section 01, CRN 20196 Same As: F&ES 793, section 01 Same As: ANTH 473, section 01 Same As: ARCG 473, section 01 Same As: NELC 473, section 01 Same As: ANTH 773, section 01 Same As: ARCG 773, section 01 Same As: NELC 588, section 01	Harvey Weiss	The coincidence of societal collapses throughout history with decadal and century-scale abrupt climate change events. Challenges to anthropological and historical paradigms of cultural adaptation and resilience. Examination of archaeological and historical records and high-resolution sets of paleoclimate proxies.

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Biological & Environmental Influences on Health		Principles of Infectious Diseases II	EMD 518 Section 01, CRN 29769	Amy Bei	This course explores the epidemiology and biology of infectious agents and the diseases they cause. Through a theme-based, integrated approach, students learn about the epidemiology, pathogenesis, prevention, and control of bacteria, viruses, and eukaryotic parasites of public health importance. Emphasis is placed on epidemiological methods, routes of transmission, host-pathogen interactions, and mechanisms of virulence. The course also teaches skills for understanding and evaluating the published literature, specifically through class discussions and oral presentations of assigned readings by students. The course builds upon concepts covered in EMD 517 and introduces new topics such as infectious causes of chronic diseases; and vector-borne, zoonotic, and emerging pathogens.
Biological & Environmental Influences on Health		Human Evolutionary Biology and Life History	ANTH 242 Section 01, CRN 22634	Claudia Valeggia	The range of human physiological adaptability across environments and ecologies. Effects of energetic constraints on growth, reproduction, and behavior within the context of evolution and life history theory, with special emphasis on traditional non-Western societies.
Health & Societies	Political Economy & Governance in Health	Bioethics and Law	PLSC 257 Section 01, CRN 23395	Stephen Latham	The treatment by American law of major issues in contemporary biomedical ethics: informed consent, assisted reproduction, abortion, end-of-life care, research on human subjects, stem cell research, and public health law. Readings include legal cases, statutes, and regulations.
Health & Societies	Political Economy & Governance in Health	Health Disparities and Health Equity	ANTH 453, section 01 Same As: HLTH 425, section 01	Catherine Panter-Brick	A biocultural perspective on debates in medical anthropology and global health that focus on health disparities and equity. The intersection of biological and cultural issues in matters of health research and intervention. Application of theoretical frameworks to case studies in global health inequality.
Health & Societies	Historical Approaches	Vaccination in Historical Perspective	HIST 403J HSHM 473	Jason Schwartz	For over two centuries, vaccination has been a prominent, effective, and at times controversial component of public health activities in the United States and around the world. Despite the novelty of many aspects of contemporary vaccines and vaccination programs, they reflect a rich and often contested history that combines questions of science, medicine, public health, global health, economics, law, and ethics, among other topics. This course examines the history of vaccines and vaccination programs, with a particular focus on the 20th and 21st centuries and on the historical roots of contemporary issues in U.S. and global vaccination policy. Students gain a thorough, historically grounded understanding of the scope and design of vaccination efforts, past and present, and the interconnected social, cultural, and political issues that vaccination has raised throughout its history and continues to raise today.
Health & Societies	Political Economy & Governance in Health	Comparative Health Care Systems	HPM 576	Chimaeze Ndumele	This course examines the basic structure of health care systems across countries, with a focus on how system design can impact the provision of care. Health care systems evolve within distinct cultures; consequently, these systems vary substantially in the ways they finance, organize, and deliver care. In spite of these differences, the aims of health care systems worldwide are often quite similar: chiefly, to facilitate access to high-quality care that improves health at a reasonable cost. Over the course of the term we identify themes in how countries organize their health care systems, examine the strengths and weaknesses of various approaches to the payment and delivery of health care, and explore specific examples of ongoing efforts to reform health systems. Recurring concepts include the role of public and private systems in financing and delivering health care, the impact of the local environment on the structure of health care systems, and the effect of health system design on patient and provider behavior.

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Health & Societies		Political Landscapes of Tourism	ER&M 356 Section 01, CRN 20124 Same As: AMST 350, section 01 Same As: WGSS 235, section 01	Jacinda Tran	This interdisciplinary course mobilizes tourism as a site for exploring dimensions and scales of power along racial, gendered, sexual, economic, historic, and geopolitical axes. By taking spatial analysis as the main mode of inquiry, students learn how to critically read the visual cultures, laboring bodies, and uneven topographies that comprise the cultural terrain of tourist landscapes. Temporally, the class covers colonial cartographies of tourism, the postwar turn towards mass tourism, and our current age of global post-Fordist tourism. How does the tourist industrial complex develop alongside modes of colonial, military, and financial world-making? In what ways do semiotic, affective, and technologic regimes map onto geographies of tourism? Is there space for critical engagement?
Health & Societies	Biological & Environmental Influences on Health	Critical Issues in Global Health	HPM 566 Section 01, CRN 29780 Same As: EMD 566, section 01	Kaveh Khoshnood	The course focuses on critical challenges to the health of the poor in low- and middle-income countries and pays particular attention to how these health gaps can be addressed in low-cost and highly effective ways. The course covers the architecture, politics, and governance of global health; key trends in approaches to meeting the health needs of the poor in low- and middle-income countries; and how science and technology can be harnessed for this purpose. It examines the burden of disease and the determinants of this burden; covers the leading causes of illnesses, disability, and preventable death from communicable and noncommunicable diseases, with special attention to women and children; and focuses particular attention on key health systems issues and recent efforts to overcome them, especially in low-income settings.
Health & Societies	Performance Representation & Health	LGBTQ Population Health	SBS 570 Section 01, CRN 29789 Same As: WGSS 570, section 01 Same As: SOCY 605, section 01	John Pachankis	Sexual and gender minority individuals (e.g., those who identify as LGBTQ) represent a key health disparity population in the United States and worldwide, but high-quality evidence of this problem has historically been slow to accumulate. This course engages students in critically examining today's rapidly expanding empirical knowledge regarding sexual and gender minority health by considering challenges to, and opportunities for, conducting this research with methodological rigor. Students consider social and ecological influences on sexual and gender minority health, including migration, community, and neighborhood influences. Social institutions, including religion, school, family, and close relationships, are examined as sources of both stress and support. Given the relevance of individual and collective identity and stress as mechanisms through which stigma impacts sexual and gender minority health, the empirical platform of the course is complemented by intersectionality theory, critical postmodern work on identity fluidity and multiplicity across the life course, and minority stress conceptualizations of health. Students apply lessons learned in the course to evaluating and developing policy and health care interventions for this increasingly visible segment of the global population.
Historical Approaches		Sex, Life, and Generation	HIST 260J Section 01, CRN 27741 Same As: HSHM 468, section 01	Ivano Dal Prete	Theories and practices of life, sex, and generation in Western civilization. Politics and policies of conception and birth; social control of abortion and infanticide in premodern societies; theories of life and gender; the changing status of the embryo; the lure of artificial life.

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Historical Approaches	Performance Representation & Health	Race and Disease in American Medicine	HIST 128J HSHM 475, section 01	Sakena Abedin	An exploration of the history of race and disease in American medicine from the late 19th century to the present, focusing on clinical practice and clinical research. We discuss cancer, psychiatric disease, sickle cell disease, and infectious diseases including tuberculosis and HIV. We examine the role of race in the construction of disease and the role of disease in generating and supporting racial hierarchies, with special attention to the role of visibility and the visual in these processes. We also consider the history of race and clinical research, and the implications of racialized disease construction for the production of medical knowledge.
Historical Approaches	Political Economy & Governance in Health	Cultures of Western Medicine	HIST 244 Section 01, CRN 29035 Same As: HSHM 321, section 01	John Warner	A survey of Western medicine and its global encounters, encompassing medical theory, practice, institutions, and healers from antiquity to the present. Changing concepts of health, disease, and the body in Europe and America explored in their social, cultural, economic, scientific, technological, and ethical contexts.
Historical Approaches	Biological & Environmental Influences on Health	Global Catastrophe since 1750	HIST 416 Section 01, CRN 27731 Same As: HSHM 211, section 01 Same As: EVST 211, section 01 Same As: G&G 211, section 01	Willia Rankin	A history of the geological, atmospheric, and environmental sciences, with a focus on predictions of global catastrophe. Topics range from headline catastrophes such as global warming, ozone depletion, and nuclear winter to historical debates about the age of the Earth, the nature of fossils, and the management of natural resources. Tensions between science and religion; the role of science in government; environmental economics; the politics of prediction, modeling, and incomplete evidence.
Historical Approaches		Origins of U.S. Global Power	HIST 128 Section 01, CRN 29835 Same As: AMST 228, section 01 Same As: GLBL 201, section 01	David Engerman	This course examines the causes and the consequences of American global power in the “long 20th century,” peeking back briefly into the 19th century as well as forward into the present one. The focus is on foreign relations, which includes but is not limited to foreign policy; indeed, America’s global role was rooted as much in its economic and cultural power as it was in diplomacy and military strength. We study events like wars, crises, treaties, and summits—but also trade shows and movie openings. Our principal subjects include plenty of State Department officials, but also missionaries, business people, and journalists. We pay close attention also to conceptions of American power; how did observers in and beyond the United States understand the nature, origins, and operations of American power?
Historical Approaches		History of Reproductive Health and Medicine in the U. S.	HSHM 206	M. Rich	This course surveys the history of reproductive health and medicine in the United States from the late eighteenth century to the present. The course emphasizes the cultural and historical contexts of reproductive health; the significance of reproduction within the broader social, cultural, and political history of the United States; and the entanglements of reproductive medicine with social and political categories of race, gender, disability, nation, and kinship. Topics include the management of reproduction in U.S. slavery and empire, reproductive medicine and concepts of race, practitioners and professional authority over childbearing and pregnancy, eugenics and sterilization, movements for reproductive rights and healthcare, reproductive biotechnology, and present-day disparities in access to and quality of reproductive care.

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Historical Approaches	Performance Representation & Health	Health Politics, Body Politics	WGSS 730 Section 01, CRN 27759 Same As: HSHM 736, section 01 Same As: HIST 943, section 01	Naomi Rogers	A reading seminar on struggles to control, pathologize, and normalize human bodies, with a particular focus on science, medicine, and the state, both in North America and in a broader global health context. Topics include disease, race, and politics; repression and regulation of birth control; the politics of adoption; domestic and global population control; feminist health movements; and the pathologizing and identity politics of disabled people
Performance Representation & Health	Political Economy & Governance in Health	Gender, Justice, Power, and Institutions	WGSS 207 Section 01, CRN 28708	Joseph Fischel	Examination of how inequalities based on gender, race, caste, class, sexuality as well as a host of other identities are embedded in institutions that make up our social world. From the family and the home to the workplace, from the University, and the Corporation, to the Military and Media, we track how inequalities emerge and are sustained by power and institutional structures. We also see how they are challenged and what sorts of instruments are needed to challenge them. In particular, we focus on sexual politics and sexual violence as a key issue to understanding the gendered workings of institutions, in order to examine structures that sustain inequality. Through the semester, we hope to consider many domains of life—bedrooms and boardrooms, international borders and feminist movements—to understand the stubborn and sticky forms and hierarchies of power that are challenged and contested by activists, scholars, and communities.
Performance Representation & Health	Political Economy & Governance in Health	Introduction to Critical Refugee Studies	AMST 206 Same As: ER&M 221, section 01 Same As: WGSS 222, section 01	Quan Tran	Reconfiguring refugees as fluid subjects and sites of social, political, and cultural critiques. Departing from dominant understandings of refugees as victims, consideration instead of refugees as complex historical actors, made visible through processes of colonization, imperialism, war, displacement, state violence, and globalization, as well as ethical, social, legal, and political transformations. Focus on second-half of the twentieth century.
Performance Representation & Health		Transnational Approaches to Gender & Sexuality	WGSS 206 Section 01, CRN 28707	Evren Savci	Examination of transnational debates about gender and sexuality as they unfold in specific contexts. Gender as a category that can or cannot travel; feminist critiques of liberal rights paradigms; globalization of particular models of gender/queer advocacy; the role of NGOs in global debates about gender and sexuality.
Performance Representation & Health		Contesting Injustice	AFAM 186 Section 01, CRN 20673 Same As: PLSC 378, section 01 Same As: LAST 214, section 01 Same As: SOCY 170, section 01	Elisabeth Wood	Exploration of why, when, and how people organize collectively to challenge political, social, and economic injustice. Cross-national comparison of the extent, causes, and consequences of inequality. Analysis of mobilizations for social justice in both U.S. and international settings. Intended primarily for freshmen and sophomores.
Performance Representation & Health		The Spectacle of Disability	AMST 406 Section 01, CRN 20047 Same As: ENGL 326, section 01	James Berger	Examination of how people with disabilities are represented in U.S. literature and culture. Ways in which these representations, along with the material realities of disabled people, frame society's understanding of disability; the consequences of such formulations. Various media, including fiction, nonfiction, film, television, and memoirs, viewed through a wide range of analytical lenses.

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Performance Representation & Health		The Art of Crisis	HSAR 436 Section 01, CRN 20585	Janna Fiduccia	This course examines the intersection of artistic and political crises from the nineteenth century to the present. We explore an array of calamities, from psychological breakdowns and identity crises to political revolutions, financial crashes, and climate chaos. Reading primary texts alongside artworks that illustrate or issue out of these crises, we investigate whether there is such a thing as an art of crisis: a set of formal characteristics or strategies for coming to terms with, surviving, or accelerating crisis. We ask: does art made during times of crisis obey different aesthetic criteria, or require different interpretive tools? How does the cyclical structure of crisis and recovery relate to narratives of cultural progress? Do we require the concept of crisis to explain the production of art in general, and how might art appear without it?
Performance Representation & Health	Political Economy & Governance in Health	Sex and Global Politics	WGSS 378 Section 01, CRN 28710 Same As: WGSS 625, section 01 Same As: ANTH 381, section 01	Graeme Reid	Global perspectives on the sexual politics of gender identity, sexual orientation, and human rights. Examination of historical, cultural, and political aspects of sexual orientation and gender identity in the context of globalization.
Performance Representation & Health	Health & Societies	Multispecies Worlds	AMST 459 Section 01, CRN 29398	Kathryn Dudley	This seminar explores the relational and material worlds that humans create in concert with other-than-human species. Through an interdisciplinary analysis of the problematic subject of anthropology—Anthropos—we seek to pose new questions about the fate of life worlds in the present epoch of anthropogenic climate change. Our readings track circuits of knowledge from anthropology and philosophy to geological history, literary criticism, and environmental studies as we come to terms with the loss of biodiversity, impending wildlife extinctions, and political-economic havoc wrought by global warming associated with the Anthropocene. A persistent provocation guides our inquiry: What multispecies worldings become possible to recognize and cultivate when we dare to decenter the human in our politics, passions, and aspirations for life on a shared planet?
Political Economy & Governance in Health		Equality	ECON 473	John Roemer	Egalitarian theories of justice and their critics. Readings in philosophy are paired with analytic methods from economics. Topics include Rawlsian justice, utilitarianism, the veil of ignorance, Dworkin's resource egalitarianism, Roemer's equality of opportunity, Marxian exploitation, and Nozickian procedural justice. Some discussion of American economic inequality, Nordic social democracy, and the politics of inequality. Recommended preparation: intermediate microeconomics.
Political Economy & Governance in Health		The Politics of American Public Policy	PLSC 214 Section 01, CRN 24111	Jacob Hacker	Public policy in the United States and the methodological and theoretical tools used to study the forces that shape it. Economic and political science perspectives on the policy process and contemporary American governance. Domestic policy issues such as health care, economic inequality, job insecurity, the federal debt, environmental protection, criminal justice, financial regulation, and primary and higher education.

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Political Economy & Governance in Health	Health & Societies	Environmental Law and Politics: Global Food Challenges	<p>GLBL 282 Section 01, CRN 29825</p> <p>Same As: EVST 255, section 01 Same As: F&ES 255, section 01 Same As: PLSC 215, section 01</p>	John Wargo	We explore relations among food, environment, health, and law. We consider global-scale avoidable challenges such as: starvation and malnutrition, obesity, other food related human diseases, climate instability, soil loss, water depletion and contamination, microbial hazards, chemical contamination, food waste, dietary convergence, air pollution, energy, packaging, culinary globalization, and biodiversity loss. We focus on laws that influence the world's food system, including those intended to reduce or prevent environmental and health damages. Other laws protect rights of secrecy, property, speech, confidential business information, free trade, worker protection, equal opportunity, and freedom from discrimination. Ethical concerns of justice, equity, and transparency are prominent themes. Examples of effective law, consumer movements and corporate innovations provide optimism for the future of responsible food.
Political Economy & Governance in Health		Theories, Practices, and Politics of Human Rights	PLSC 148	P. Linden-Retek	Introduction to core human-rights issues, ideas, practices, and controversies. The concept of human rights as a philosophical construct, a legal instrument, a political tool, an approach to economic and equity issues, a social agenda, and an international locus of contestation and legitimation. Required for students in the Multidisciplinary Academic Program in Human Rights.
Political Economy & Governance in Health		Gender, Race, and the Everyday Politics of the Global Political Economy	<p>PLSC 165 Section 01, CRN 20734</p> <p>Same As: WGSS 165, section 01</p>	Stephanie Redden	Introduction to the Everyday Politics approach to international relations (IR) and international political economy (IPE), which has steadily gained in popularity in the field over the last ten years. Students become familiar both with more recent feminist and mainstream articulations of this approach, as well as examine its earlier beginnings within feminist IR and IPE scholarship. In addition to providing a broad overview of this approach, the course allows students the opportunity to consider several case studies that showcase the importance of considering everyday spaces and actors in order to better understand the current global political and economic climate in more depth. Through these case studies, students unpack the multidirectional relationship between the global and the everyday, as well as investigate the highly gendered and racialized realities of both spaces. In doing so, students reflect on what impacts these factors have on how people of various social identities choose to resist and what potential impacts their actions have within—and beyond—everyday spaces. Finally, in exploring this material, students gain a deeper understanding and awareness of how their own choices and actions are connected—and contribute to—broader, global systems and processes.
Political Economy & Governance in Health	Historical Approaches	Citizenship, Race, and Public Health in U.S. History	HSHM 424	M. Rich	This seminar examines the history of citizenship, race, and public health in the modern United States. The course explores how public health practices structured shifting boundaries of social and political inclusion, focusing particularly on the late nineteenth and early twentieth centuries. How did public health interventions serve to affirm, regulate, or deny the citizenship of different groups? How have public health issues both shaped and been shaped by systems of racial inequality? Topics include the history of public health and immigration, surveillance and regulation of racialized and gendered subjects, eugenics and racial hygiene, health activism and reform, and ethics of public health powers.
Political Economy & Governance in Health	Understanding & Interpreting Quantitative Data	Approaches to International Development	GLBL 225	Robert Jensen	The unique set of challenges faced by households in developing countries, and the economic theories that have been developed to understand them. Health, education, and discrimination against women in the household; income generation, savings, and credit; institutions, foreign aid, and conflict. Recent econometric techniques applied to investigate the underlying causes of poverty and the effectiveness of development programs. Enrollment limited to sophomores, juniors, and seniors. Prerequisite: GBL 121.

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Understanding & Interpreting Quantitative Data	Biological & Environmental Influences on Health	Epidemiology and Public Health	HLTH 240 Section 01, CRN 23713 Same As: GLBL 193, section 01	Marney White	A general introduction to epidemiology and the field of public health. Methods of epidemiological investigation, research, and practice. Emphasis on study design and the skills necessary for the conduct of mentored field research. Priority to Global Health Fellows.
Understanding & Interpreting Quantitative Data		YData: An Introduction to Data Science	S&DS 123 Section 01, CRN 22333 Same As: S&DS 523, section 01	Joshua Kalla	Computational, programming, and statistical skills are no longer optional in our increasingly data-driven world; these skills are essential for opening doors to manifold research and career opportunities. This course aims to dramatically enhance knowledge and capabilities in fundamental ideas and skills in data science, especially computational and programming skills along with inferential thinking. YData is an introduction to Data Science that emphasizes the development of these skills while providing opportunities for hands-on experience and practice. YData is accessible to students with little or no background in computing, programming, or statistics, but is also engaging for more technically oriented students through extensive use of examples and hands-on data analysis. Python 3, a popular and widely used computing language, is the language used in this course. The computing materials will be hosted on a special purpose web server.
Understanding & Interpreting Quantitative Data		Introductory Statistics, Intensive	S&DS 220 Section 01, CRN 21643 Introductory Statistics, Intensive Same As: S&DS 520, section 01	Joseph Chang	Introduction to statistical reasoning for students with particular interest in data science and computing. Using the R language, topics include exploratory data analysis, probability, hypothesis testing, confidence intervals, regression, statistical modeling, and simulation. Computing taught and used extensively, as well as application of statistical concepts to analysis of real-world data science problems. MATH 115 is helpful, but not a required.
Understanding & Interpreting Quantitative Data		Data Exploration and Analysis	S&DS 230 Section 02, CRN 21644 Same As: PLSC 530, section 02 Same As: S&DS 530, section 02 Same As: PLSC 530, section 02	Jonathan Reuning-Scherer	Survey of statistical methods: plots, transformations, regression, analysis of variance, clustering, principal components, contingency tables, and time series analysis. The R computing language and Web data sources are used. Prerequisite: a 100-level Statistics course or equivalent, or with permission of instructor.
Understanding & Interpreting Quantitative Data		Introductory Statistics	S&DS 100 Section 01, CRN 21642 Same As: S&DS 500, section 01	William Brinda	An introduction to statistical reasoning. Topics include numerical and graphical summaries of data, data acquisition and experimental design, probability, hypothesis testing, confidence intervals, correlation and regression. Application of statistical concepts to data; analysis of real-world problems. May not be taken after S&DS 101–106 or 109.

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Understanding & Interpreting Quantitative Data	Political Economy & Governance in Health	Political Epidemiology	EMD 582 Section 01, CRN 29781 Same As: EP&E 314, section 01 Same As: GLBL 716, section 01	Gregg Gonsalves	<p>Political epidemiology is the study of the impact of welfare regimes, political institutions, and specific policies on health and health equity. This course emphasizes the last among these—the effects of specific policies—on health outcomes in infectious diseases and other areas of human health and development. The course takes an issues- and methods-based approach, looking at how to evaluate the effects of political determinants of health (e.g., immigration, education, fiscal and environmental policies) through experimental and quasi-experimental methods, as well as various techniques associated with policy modeling (e.g., Markov models, systems dynamics, microsimulation, spatial models).</p> <p>Prerequisites: EPH 505 or a similar introductory course in statistics. S&DS 541, MATH 241, or a similar introductory course in probability is recommended but not required, and a review of probability is offered in the first discussion section.</p>
Understanding & Interpreting Quantitative Data		Estimation and Error	MATH 108 Section 01, CRN 27943	Sudesh Kalyanswamy	<p>A problem-based investigation of basic mathematical principles and techniques that help make sense of the world. Estimation, order of magnitude, approximation and error, counting, units, scaling, measurement, variation, simple modeling. Applications to demographics, geology, ecology, finance, and other fields. Emphasis on both the practical and the philosophical implications of the mathematics.</p> <p>No knowledge of calculus required. Enrollment limited to students who have not previously taken a high school or college calculus course.</p>
Understanding & Interpreting Quantitative Data		The Structure of Networks	S&DS 160 Section 01, CRN 26979 Same As: AMTH 160, section 01 Same As: MATH 160, section 01	Ronald Coifman	<p>Network structures and network dynamics described through examples and applications ranging from marketing to epidemics and the world climate. Study of social and biological networks as well as networks in the humanities. Mathematical graphs provide a simple common language to describe the variety of networks and their properties.</p>