

## SCIENCE IN HUMAN CULTURE -- Spring Quarter 2010 Undergraduate Course Offering

### ANTHROPOLOGY

ANTHRO 390-0 –

TOPICS IN ANTHROPOLOGY: GENOMICS & SOCIAL LIFE

LINDSAY SMITH      TTh 4-5:20      Kresge 2-415

**Course Description:** From genetic ancestry testing to national DNA databanks, from tests for breast cancer to personalized medicine, genetic technologies increasingly affect our day-to-day relationships to each other, our communities, and the state. What are popular and scientific conceptualizations of the human genome? How are they related to older scientific movements like eugenics? How do people use genetic technologies in the world? What are the ethical and social implications of these technologies? Beginning in the lab and moving out, this course will explore how genetic technologies are created, contested, and given meaning. Our analysis of specific technologies will be informed by readings on the social and ethical dimensions of science, individual and group identity, and power and surveillance. The course will explore four major areas: (1) eugenics to genomics; (2) genetic testing and treatment of disease; (3) ancestry and race; and (4) forensic and state DNA databanking.

### COMMUNICATION STUDIES

COMM\_ST 386-0 - 20-LEC(57296)

SCIENCE, TECHNOLOGY, AND SOCIETY

JENNIFER LIGHT      M 2-4:50      Frances Searle 2407

**Course Description:** Science and technology are essential components of our everyday experience. They influence the ways we understand ourselves and the world around us. How do scientists develop new knowledge? How do engineers develop new technologies? When and how do scientific and technological innovations alter our lives and our society? This course examines these questions by focusing on science and technology as fundamentally social practices. Course topics include the role of the military in technical innovation, the relationship between technology and social progress, and how innovations in science and technology may have influenced evolving conceptualizations of gender and race. Taking a historical approach to our subject, throughout the course we also aim to answer the question: When and how have innovations in information and communication technology, and the history of communication research, intersected with the larger history of science and technology in the 20th and 21st centuries?

### ECONOMICS

ECON 307-0 - 20-LEC(43211)

ECONOMICS OF MEDICAL CARE

BURTON ALLEN WEISBROD      TTh 9:30-10:50      Kresge 2-415

**Course Description:** Health care constitutes some 15 percent of GDP in the U.S.-triple the share 50 years ago. Why is it so large and growing? Why is it so much greater than for other industrialized countries? Why is insurance so important in health care, and what are the forms and effects of health care insurance? Why is there so much attention to importation of pharmaceuticals from other countries? Why has the technology of health care changed so dramatically, and what are the consequences? How should "quality" be measured for hospitals, physicians, and other health care providers, and why is its measurement important? Has the cost of health care really risen dramatically? Why is the health care sector regulated so heavily -- e.g., pharmaceuticals, hospitals, and nursing homes--and what are the regulatory issues? Why is so little known about the safety and efficacy of herbal medications, and does that have anything to do with economic forces? Why are nonprofit organizations

so important in health care? Is prevention really cheaper than cure? What is the problem regarding medical malpractice insurance costs? Why do doctors no longer make house calls? These are but some of the issues to be examined in the course, which focuses on the effects of incentives, market forces, and public policies on the health care system of the U.S.. The course assumes familiarity with statistical methods and with micro-economic concepts at the intermediate level. Do not register for the course if you have not met the prerequisites shown below. However, while portions of the course will be theoretic or econometric in focus, the course will be primarily oriented to public policy analysis--applications of tools and concepts from economics to issues of public policy.

**Registration Requirements:** Economics 281, 310-1, and familiarity with econometric regression techniques.

**Teaching Method:** Two lectures per week plus an optional TA session, which is not definite but is highly likely, on Fridays at the same class starting time, but only for 50 minutes. There will also be homework assignments, with answers discussed at the TA sessions, and occasional quizzes, which will be unannounced.

**Evaluation Method:** Evaluation and grading will be made through a final examination (35% of the total grade), two midterm exams (25% each), and "class participation" (15%). Class participation includes attendance, involvement in class discussions, and quizzes and homework assignments. Regular class attendance is expected, as many matters not found in the assigned readings will be dealt with in class, and all cannot be covered in the exams. More is expected than your simply responding when called upon. There will be no make-up exam if a mid-term is missed. If I determine that the reason for the missed exam is acceptable, the weight normally given to that exam will be added to the final exam weight. Otherwise, a missed exam will be counted as a failing grade. (The reason for this policy is that there is no way that I can prepare an alternate exam that makes grading comparable with that of other students' scores.)

**Class Materials (Required):** TBA

**Class Notes:** I want to emphasize that this course is directed at understanding public policy issues and options. My goal is for students to understand the basic economic forces influencing public and private decision-making in health care, not only now but as they may change in the years ahead. My emphasis will be on developing students' ability to apply material from the readings and from lectures to realistic situations. My view is that memorization of material is of little or no value without the ability to know when and how to apply it to new situations. Thus, students will be expected to think, be critical, and consider alternatives and their consequences, and exams will be designed to test those skills.

**Class Attributes:** SoComm Individual/Social Behavior Distro Area

ECON 370-0 -20-LEC(43218)

ENVIRONMENTAL & NATURAL RESOURCE ECONOMICS:

LAURA KIESLING

MWF 2-3:20

University Hall 122

**Course Description:** The environment and our natural resources are scarce yet their values are quite hard to determine. Furthermore, there are a variety of problems with the incentives to use them well. This course will define and examine "environmental problems" in terms of economic efficiency. Next, we will discuss the methods (and shortcomings of these methods) used by economists and policy-makers to place dollar values on environmental amenities (since such valuations will determine what policy options are deemed "efficient"). Then we will apply these tools to look at a particular set of environmental problems -- common-pool resource allocation problems. The common-pool resource problems and policies we'll analyze are air pollution, fisheries, and climate change.

**Registration Requirements:** Econ 201, 202, 281 and 310-1

**Teaching Method:** Two 80-minute lectures with lots of discussion and some in-class small-group work

**Evaluation Method:** Midterm, Final group research project, problem sets, in-class group work.

**Class Materials (Required):** Economics of the Environment, Robert Stavins (5th Edition) ([Amazon link](#))

**Class Attributes:** SoComm Individual/Social Behavior Distro Area

### ENGLISH

ENGLISH 338-0 - 20-LEC(34129)

STUDIES IN RENAISSANCE LITERATURE: MAGIC, SCIENCE, & RELIGION

GLENN SUCICH

TTh 12:30 - 1:50

Parkes Hall 215

**Course Description:** Of the many innovations to emerge during the Renaissance in Europe, advances in science were among the most significant. The discoveries of Copernicus, Galileo, William Harvey, and others challenged the received wisdom of the ancients, as well as the authority of the Bible, changing the way people imagined the physical world and their relation to the universe. This course will explore how the leading intellectuals of the Renaissance responded to these changes in their poetry and prose. In particular, we will examine how writers of the age wrestled with the profound challenges the scientific revolution posed to religion. How did philosophers such as Descartes and Hobbes explain the role of God in a universe they increasingly regarded as mechanistic? How did poets respond to the age's growing commitment to experimentation, empirical data, and reason as the most reliable guides to truth? Finally, how did radical innovations in science encourage equally radical innovations in politics, religion, medicine, and art?

**Evaluation Method:** Grades will be based on one short essay (4-5 pages), a midterm exam, a final research assignment (8-10 pages), and participation/attendance.

**Class Materials (Required):** Primary sources will likely include Platon Timaeus, selections from Aristotle's Physics, selections from the Bible, selected works by Sidney, Shakespeare, Jonson, Milton, Donne, Herbert, Marvell, and others. We will also consult a variety of secondary materials, including essays on the history of science, magic, and the occult.

**Class Attributes:** Literature & Fine Arts Distro Area

### ENVIRONMENTAL POLICY

ENVR\_POL 390-0 - SPECIAL TOPICS IN ENVIRONMENTAL POLICY AND CULTURE

**also listed as:** POL\_SCI 367-0 - POLITICS AND NATURE IN A COMPARATIVE PERSPECTIVE  
POLITICS & NATURE IN COMP PERS

H PAUL FRIESEMA

TTh 9:30 - 10:50

Abbott Aud: Pancoe Building

**Course Description:** The class will consider the impact of political processes and structures upon natural systems. It will examine the extent people can fashion political instruments (laws, policies, programs) to protect biodiversity, and arrest and reverse the degradation of the environment. While we will consider the politics of nature in the United States, the primary focus of the course is global. We will consider the ethical underpinnings of environmental concerns, with a particular emphasis on Aldo Leopold's 'land ethic' (Sand

County Almanac), in hopes students can refine their own land ethic. We will also explore some complicated concepts occurring in both the natural science and political debates about managing nature. Some of these will be 'the tragedy of the commons', concerning the management of common properties, 'wilderness', and concepts of 'sustainable development', something of an oxymoron. We will consider 'ecology' itself, both as a discipline and a symbol. A particular focus of the course will be the examination of the impacts of urbanization and globalization on the prospects for maintaining viable natural systems. Within the framework of urbanization/globalization, we will consider the possibilities for transnational regimes to deal with fundamental global environmental issues-the ocean fisheries, global climate change, the loss of rainforests. We will evaluate the possibilities of an effective global environmental movement.

**Class Attributes:** Social & Behavioral Sciences Distro Area. SoComm Additional Distro Area.

### ENVIRONMENTAL POLICY AND CULTURE

See also the other classes in Environmental Policy and Culture

### GLOBAL HEALTH

See the various courses in Global Health

### GENDER STUDIES

GNDR\_ST 332-0 - 20-LEC(42891)

GENDER, SEXUALITY, AND HEALTH: GENDER & HEALTH ACTIVISM

AMY PARTRIDGE TTh 12:30 - 1:50 Kresge 2-359

**Course Description:** How do conceptions of "health" relate to ideological assumptions about gender, race, class, and sexuality? In this course we will explore these questions through a close examination of activist movements that have attempted to challenge contemporary conceptions of health and models of disease. Case studies will include Margaret Sanger's Birth Control Movement, the 1970s Women's Health Movement, the "Pro-Life" movement, AIDS and breast cancer activism, and feminist responses to the "epidemic" of anorexia in the 1980s and the (gendered) practice of "cosmetic pharmacology" in the present. In each case, we will consider how activists frame the problem, the tactics they use to mobilize a diverse group of social actors around the problem, and their success in creating a social movement that challenges contemporary medical models and the ideological assumptions that inform them. The course also introduces students to recent interdisciplinary scholarship on new social movements.

**Class Attributes:** Social & Behavioral Sciences Distro Area. SoComm Individual/Social Behavior Distro Area

### HISTORY

HISTORY 215-0 - 01-LEC(35135)

WESTERN HEMISPHERE ENVIRONMENTS

JOSEF BARTON TTh 9:30 - 10:50 Frances Searle 1441

**Course Description:** Environmental change is a grand theme in the history of North and South America. From the great plague of sheep that ate its way across Mexico through the rubber boom that hit the Brazilian Amazon to the green revolution that proclaimed it would feed everybody, many forces have shaped many new worlds in the Western Hemisphere. Running throughout this five centuries' long history is a central theme: the conquest, exploitation, and restoration of the commons -- of the natural resources of land, water, timber, and

air that once belonged to all. This lecture course takes up this great story in four segments. First, the course will spend two weeks on the migration to frontiers, beginning with New England and New Spain in the 15th and 16th centuries and running through Alaska and Patagonia in the 1960s. For the second section, the course will confront an often forgotten kind of environmental change, the 19th-century filling up of two continents. In the third part, the course will consider the great 20th-century selling-off of natural resources to private owners. And, finally, in the fourth segment, the course will seek to understand more recent efforts to restore public access to and control of common resources, in movements ranging from clean water campaigns to sustainable agriculture to rebuilding barrier islands and wetlands in the wake of hurricanes.

**Registration Requirements:** No prerequisites

**Teaching Method:** Lecture and Workshops

**Evaluation Method:** The mid-term examination will count for 20% of the final grade, the take-home final examination for 30% of the final grade, the term essay for 30% of the final grade, and class participation for 20% of the final grade. Class participation will be evaluated on a combination of attendance and quality of discussion in class meetings and in workshops.

**Class Materials (Required):** Reading requirements consist of sections of or entire contents of the following books, on-line reading packets, and on-line documentation and maps.

- \* Brown, Bruce. 1995. Mountain in the clouds; a search for the wild salmon. Seattle: University of Washington Press;
- \* Cronon, William. 1983. Changes in the land Indians: colonists, and the ecology of New England. New York: Hill and Wang;
- \* Karlen, Arno. 1996. Man and microbes: disease and plagues in history and modern times. New York: Simon & Schuster;
- \* Melville, Elinor G. K. 1994. A plague of sheep: environmental consequences of the conquest of Mexico. Studies in Environment and History. Cambridge England, New York, NY, USA: Cambridge University Press;
- \* Raffles, Hugh. 2002. In Amazonia: a natural history. Princeton, N.J.: Princeton University Press;
- \* Wilcove, David S. 2008. No way home: the decline of the world's great animal migrations. Washington: Island Press/Shearwater Books;
- \* Wright, Angus L. 2005. The death of Ramón González: the modern agricultural dilemma. Rev ed. Austin: University of Texas Press.

**Class Notes:** AREA OF CONCENTRATION: Americas

**Class Attributes:** Historical Studies Distro Area

HISTORY 275-1 - 20-LEC(56912)

ORIGINS OF WESTERN SCIENCE & MEDICINE

DANIEL MARGOCSY

TTh 12:30 - 1:50

Parkes Hall 213

**Course Description:** The course examines the rapid development of a new kind of natural knowledge between 1500 and 1800: modern science and medicine. We will focus on the stunning proliferation of new methods of mapping, visualizing and modeling the natural world - from the human body to the remote heavens. When, how and why did scientists begin to dissect human bodies; invent telescopes and microscopes to explore microscopic structures and distant worlds; create complex projection systems to map the earth; and use mathematics to model the movements of the solar system? How did these new methods of description differ from each other and how did scientists attempt to resolve these conflicts to provide a unified view of nature? We will focus on figures like Copernicus, Gerard Mercator, Isaac Newton, Andreas Vesalius, William Harvey and others from this era of scientific revolution.

**Registration Requirements:** No prerequisites

**Teaching Method:** Lecture

**Evaluation Method:** Exam, mid-term: 25%; Paper, final: 30%; Short response papers and class participation, 25% and Short essay on a weekly reading (3-4 pages,) 20%

**Class Materials (Required):** TENTATIVE READING LIST:

\*\*Steven Shapin, The Scientific Revolution;

\*\*William Harvey, The Circulation of the Blood and Other Writings;

\*\*Course Pack with readings from Copernicus, Galileo, Vesalius, Hooke and Newton

**Class Notes:** AREA OF CONCENTRATION: Europe.

**Class Attributes:** Historical Studies Distro Area. SoComm Individual/Social Behavior Distro Area

HISTORY 300-0 - 23-LEC(56918)

New Lectures in History: Race & Science Knowledge

Anthony Hazard

TTh 12:30 - 1:50

Fisk Hall B17

**Course Description:** This course explores the history and role of scientific knowledge in constructing notions of racial and ethnic difference in the United States. Scholars in many fields including history, anthropology, sociology and science studies have uncovered the many ways in which the sciences broadly considered, have been central to the multifaceted project of naturalizing biological and cultural difference under the conceptual banner of race. This course seeks to explore that history while focusing on the political and social contexts in which scientific discourses of race from the late 19th century through the late 20th century have appeared. One of the main goals of the course is to demonstrate how historical contingency and ostensibly objective scientific knowledge interact to shape how scientists and non-scientists come to understand human difference in the United States.

**Registration Requirements:** No prerequisites

**Teaching Method:** Lecture

**Evaluation Method:** Discussion, presentations, short response papers, written exams.

**Class Materials (Required):** John Jackson & Nadine Weidman, eds., Race, Racism and Science: Social Impact and Interaction (Rutgers University Press/Longleaf, 2005, ISBN 9780813537368)

**Class Notes:** AREA OF CONCENTRATION: Americas

**Class Attributes:** Historical Studies Distro Area. SoComm Individual/Social Behavior Distro Area

HISTORY 392-0 - 33-LEC(36367)

TOPICS IN HISTORY: MADNESS & MEDICIN IN MOD BRIT

TERI CHETTIAR

MW 12:30 - 1:50

Annenberg Hall G29

**Course Descriptions:** The discipline of psychiatry is foundational to our understanding of a wide range of modern concepts from personality and responsibility through to illness and deviancy. Our understanding of our

own identities, our motivations and our patterns of behavior are all drawn from modern psychiatric ideas. This course provides a broad overview of psychiatric practice in Britain from the beginning of state-regulated asylums through to the advent of current policies of pharmaceutical treatment and care in the community. Using a mixture of secondary sources and primary texts, we will examine how the diagnosis and treatment of madness has been shaped through the complex interaction of social, scientific, political, economic and cultural factors. Key thematic areas for discussion will include psychiatric institutions; women, hysteria and the politics of diagnosis; the rise of psychoanalysis; WWI and shell shock; the twentieth-century rise of physical methods of treatment such as ECT, lobotomy, and drug-management; the anti-psychiatry movement; the post-WWII end of the asylum and controversial move toward care in the community.

**Registration Requirements:** No prerequisites

**Teaching Method:** Seminar

**Evaluation Method:** Students should enroll in either 392 or 395 depending upon which evaluation criteria should apply.

For the 392: Seminar Attendance and Participation: 20%. Presentation and short essay (3 pages): 30% Two Response Essays (4-5 pages): 50%

For the 395: Seminar Attendance and Participation: 20%. Presentation and short essay (3 pages): 30%. Major Essay (18-25 pages): 50%

**Class Materials (Required):** TENTATIVE READING LIST:

\*\*Roy Porter, *A Social History of Madness* [1987] (Phoenix, 1999c ISBN 1555841856);

\*\*Andrew Scull, *The Most Solitary of All Afflictions: Madness and Society in Britain, 1700-1900* (Yale University Press, 1993, ISBN 0300050518);

\*\*Ben Shephard, *A War of Nerves* (Jonathan Cape, 2000, ISBN 0712667830);

\*\*Elaine Showalter, *The Female Malady: Women, Madness and English Culture, 1830-1980* (Virago, 1987, ISBN 0140101691);

\*\*Peter Barham, *Closing the Asylum: The Mental Patient in Modern Society* (Penguin, 1992, ISBN 0140144838)

\*\*Course packet with short readings by Edward Shorter, Michel Foucault, Joan Busfield, Sander Gilman, Ben Shepard, and Nikolas Rose.

**Class Notes:** AREA OF CONCENTRATION: Europe. No P/N option (ANC grading only). **Attendance at first class is mandatory.**

HISTORY 392-0 - 36-LEC(36371)

TOPICS IN HISTORY: THE HISTORY OF SMALLPOX

ANDREW WEHRMAN TTh 9:30 - 10:50 University Hall 412

**Course Description:** In 1806 Thomas Jefferson wrote to Edward Jenner, the English country doctor who pioneered vaccination, "Future generations will know by history only that the loathsome smallpox has existed." This seminar will focus on the history of mankind's greatest killer from ancient times until the present. Particular attention will be paid to the ravages of smallpox in the Americas and its effects on individuals, communities, and events as well as global debates over the effectiveness of inoculation and vaccination from the 18th through the 20th Centuries. Jefferson has been very nearly right. Although smallpox became the only human infectious disease ever eradicated in 1980 thanks to worldwide vaccination efforts, it has recently been declared by the Centers for Disease Control as a "Category A Agent" posing a great potential threat to public health and a high potential for large-scale dissemination. Students in this course will learn that smallpox has not

only decimated populations but has also altered civilizations and has impacted politics, religion, science, and culture.

**Registration Requirements:** No prerequisites

**Teaching Method:** Seminar

**Evaluation Method:** Students should enroll in either 392 or 395 depending upon which evaluation criteria should apply.

For both the 392 and 395: Class participation and class presentation

For the 392: Three short response papers (2-3 pages), Book review (5-6 pages)

For the 395: Short research proposal, 15-25 page research paper

**Class Materials (Required):**

\*\*Noble David Cook, *Born to Die: Disease and New World Conquest, 1492-1650* (Cambridge University Press, ISBN 9780521627306);

\*\*Elizabeth Fenn, *Pox Americana: The Great Smallpox Epidemic of 1775-82* (Sutton Publishing Ltd, 2004, ISBN 9780750935449);

\*\*D.A. Henderson, *Smallpox- the Death of a Disease: The Inside Story of Eradicating a Worldwide Killer* (Prometheus Books, 2009, ISBN 9781591027225);

\*\*Donald R. Hopkins, *The Greatest Killer: Smallpox in History* (University of Chicago Press, 2002, ISBN 9780226351681);

\*\*Ann Jannetta, *The Vaccinators: Smallpox, Medical Knowledge, and the 'Opening' of Japan* (Stanford University Press, 2007, ISBN 9780804754898)

\*\*Course Packet with journal articles and primary sources

**Class Notes:** AREA OF CONCENTRATION: Americas or Europe. No P/N option (ANC grading only). Attendance at first class is mandatory.

**POLITICAL SCIENCE**

POLI\_SCI 395-0 - 20-LEC(32089)

POLITICAL RESEARCH SEMINAR: CIVIC PARTICIPATION & THE ENVIRONMENT

Yael Wolinsky      T 2- 4:50      University Hall 418

**Course Description:** This seminar examines civic participation in international, national, and local environmental governance. We will examine theories pertaining to public participation and civil society development. We will then study the role that environmental nongovernmental organizations (ENGOS) play in setting the public agenda and in environmental policy-making. We will examine case studies of ENGOS and consider their legitimacy and accountability. We will also examine the roles of the media and public opinion and look at community responses to specific environmental issues.