

HISTORY OF SCIENCE, MEDICINE, AND PUBLIC HEALTH

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History of Science, Medicine, and Public Health is an interdisciplinary program that focuses on how different forms of knowledge and technology have been created in various times, places, and cultures, and how they have shaped the modern world. The major explores a wide range of questions. Is science universal, or does each culture have its own approach to trustworthy knowledge? What is the relationship between medical expertise, social and racial inequality, and everyday life? What is the nature of technology and its relationship to political, economic, and military power? Why do even the best public health campaigns have unintended consequences?

Course topics include the history of American and Western medicine and public health, medicine and race from the slave trade to the present, health and healing in Africa, scientific knowledge production in the global South, institutions of confinement, health activism, biotechnology, the history of the earth sciences, climate change and planetary catastrophe, the scientific revolution, scientific collections, and material culture.

A major in History of Science, Medicine, and Public Health offers excellent preparation for a wide range of careers. Premedical students and others interested in health-related fields can combine preprofessional training with a broad humanistic education. The major also provides a solid foundation for any career at the intersection of the sciences, technology, and public life, including law, business, journalism, museum work, public policy, and government.

REQUIREMENTS OF THE MAJOR

See Links to the attributes indicating courses approved for the major requirements.

The major in History of Science, Medicine, and Public Health requires twelve term courses (and twelve credits), including the two-term senior requirement. Students select a concentration of seven courses that guide them through an area of specialization. The seven concentration courses must include two courses in History of Science, Medicine, and Public Health; one seminar in History of Science, Medicine, and Public Health or in History; one full-credit science course; and three electives chosen from relevant courses in any department. At least one HSHM (or HIST) seminar must be taken before the senior year.

Concentrations The seven standard concentrations in the major are: Colonialism, Knowledge, and Power; Environment and Society; Gender, Reproduction, and the Body; Media, Information, and the Public; Medicine and Public Health; Minds and Brains; Science, Technology, and Society. Students may also design customized concentrations in consultation with the director of undergraduate studies (DUS). No later than the beginning of the junior year, students in the major must select a standard concentration or indicate that they wish to design their own.

See the Concentrations section for more information.

Electives Beyond the seven concentration courses, students must complete three additional electives in History of Science, Medicine, and Public Health. One of the electives must be a seminar, and one must be chosen from a concentration other than the one selected for the major. All courses for the major are chosen in collaboration with the student's adviser.

Credit/D/Fail No more than one History of Science, Medicine, and Public Health course taken Credit/D/Fail may be applied toward the requirements of the major, and this course must be taken before the fifth term of enrollment.

Outside credit Courses taken at another institution or during an approved summer or term-time study abroad program may count toward the major requirements with DUS approval.

SENIOR REQUIREMENT

Students are held to the requirements that were in place when they declared their major. However, with approval from the director of undergraduate studies (DUS), the following senior requirements, updated for the academic year 2024-2025, may be fulfilled by students who declared the major in a prior term.

Students must complete a two-term senior project in HSHM 4900 and 4910. The Senior Project Workshop, HSHM 4200, may be taken as an elective (for half-credit) in addition to HSHM 4900 and 4910. Note, that enrolling in HSHM 4200 will be in addition to the twelve, one-credit courses.

Students select a project adviser, propose a tentative topic and title, and submit a proposal to the senior project director. The final product of the senior requirement may be a written essay or an alternative project such as a film, exhibition, catalog, atlas, or historical data reconstruction. In the case of an alternative project, the student must identify a second reader in addition to the adviser before the senior project director approves the project. The adviser or the second reader must be a faculty member in History of Science, Medicine, and Public Health. A written component of the senior project must illustrate sources and the intellectual significance of the project. For more details about requirements and deadlines, majors should consult the HSHM Senior Project Handbook; copies are available from the senior project director and on the program website.

SUMMARY OF MAJOR REQUIREMENTS

Prerequisites None

Number of courses 12 courses for 12 credits (incl senior req)

Distribution of courses 7 courses in concentration (incl 2 HSHM courses, 1 sem in HSHM or HIST taken before senior year, 1 full-credit science course, and 3 related electives); 3 addtl HSHM electives, to incl 1 sem and 1 course outside major concentration

Senior requirement Two-term project HSHM 4900 and 4910

Courses

HSHM 2040a / AMST 1120a / EVST 1120a / HIST 1120a, American Environmental History Staff

Ways in which people have shaped and been shaped by the changing environments of North America from the nineteenth century to the present. Migration of species and trade in commodities; the impact of technology, agriculture, and industry; the development of resources in the American West and overseas; the conservation and environmental movements; planning and the impact of public policies; automobiles, highways, and urban growth; toxic chemicals, radiation, and environmental justice; climate change and energy transitions. WR, HU o Course cr

HSHM 2060a / HIST 1114a, Histories of American Reproductive Health, Rights, and Activism from 1800 Staff

Are all politics reproductive politics? This course traces the reproductive history of the United States from the early nineteenth century to the present day. Questions about reproduction—and about not reproducing—are deeply tied to questions of gendered and racial rights; of bodily autonomy; of American expansion and empire; and of who counts as a citizen, or even as a human being. In the past few years, we've encountered new stories about everything from new and restrictive abortion laws, to immigrant woman who were sterilized without their consent, to new technologies in male birth control, to the inequitable childcare burden that falls to women during times of hardship, to the racist roots of foster care and residential school systems. In this course, we come to understand the historical changes in American reproduction to better understand the complicated roots of our current moment. By analyzing articles in newspapers and scientific journals, advertisements, film, patient and physician narratives, and exhibitions and material culture, students will understand reproduction as a site for empowerment and activism, as a site of medical professionalization, and as a site of health disparity. We examine reproduction capaciously, including pregnancy and childbirth, birth control and abortion, assistive reproductive technologies, and adoption and foster care. Our analysis is intersectional, and we consider what different identities meant for reproduction historically, as well as in our current moment. HU o Course cr

HSHM 2090b / EVST 2090b / HIST 1765b, Making Climate Knowledge Deborah Coen

This is a course about *how* humans have come to know what we know about our impacts on the earth's climate and our vulnerability to climate change. When did humans *first know* that their actions, in the aggregate, could transform the planet? Did scientists bear responsibility to warn of these consequences? In what ways has the modern science of climate both appropriated and undermined traditional and indigenous forms of climate knowledge? Students learn to work with the methods of history of science: we analyze science as a social and material process bound to the cultural and epistemological particularities of its historical context, and we examine the political dimensions of historical narratives about the emergence of the theory of global warming. Via hands-on experience with Yale's historical collections, students learn to analyze maps, artifacts, and instruments as historical sources. They also gain familiarity with the methods of environmental history, learning to attend to historical evidence

of shifting relationships between humans and non-humans. Finally, students become more attuned to the evidence of climate change around them and more confident in their ability to make climate knowledge for themselves. HU

HSHM 2140b / HIST 3188b, Extraterrestrials in History Ivano Dal Prete

The notion of extraterrestrials and "radical others" in history and culture from antiquity to the present. Topics include other worlds and their inhabitants in ancient Greece; medieval debates on the plurality of worlds; angels, freaks, native Americans, and other "aliens" of the Renaissance; comet dwellers in puritan New England; Mars as a socialist utopia in the early twentieth century; and visitors from space in American popular culture. HU

HSHM 2210a / HUMS 1315a / RLST 1315a, What Was the University? Noreen

Khawaja

A deep history of the university as a political, intellectual, and ritual institution. Focus on key chapters and cases in the university's formation, from the mutual-aid societies of medieval Europe to modern research institutions such as Yale. What conditions gave rise to the particular type of school we call a university? How have universities played a role in the development of modern society? How might the history of this institution help us understand its role at the center of politics today? HU o Course cr

HSHM 2240a / HSAR 1170a / HUMS 4570a, Nature and Art, or The History of Almost Everything Staff

This global introductory course surveys the interrelation of nature and art from antiquity to the present. Throughout the semester, we consider a controversial question: is it possible to understand the history of art and science as a more-than-human story? Challenging traditional narratives of human progress, we attend to episodes of invention and destruction in equal measure. We discuss how art history is inseparable from histories of extracted resources, exploited species, environmental catastrophe, racialized and gendered understandings of the 'natural' and 'unnatural', and politicized understandings of land as power. At the same time, we explore how makers across cultures approached the natural world as a locus of the divine, a source of inspiration, and the ground for both scientific inquiry and the pursuit of self-knowledge. The very notions of art and artistic creation are impossible to define without recourse to nature as both a concept and a site of lived experience. This course is open to all, including those with no prior background in art history. Sections will include visits to collections and sites across Yale campus. HU o Course cr

HSHM 2260a / HIST 1236a / HIST 236a, The Global Scientific Revolution Staff

The material, political, cultural, and social transformations that underpinned the rise of modern science between the 14th and 18th century, considered in global context. Topics include artisanal practices and the empirical exploration of nature; global networks of knowledge and trade, and colonial science; figurative arts and the emersion of a visual language of anatomy, astronomy, and natural history. HU o Course cr

HSHM 2270b / HIST 1275, Botanical Bodies: Plants, Medicine and Colonial Science

Elaine Ayers

Plants weave their way into every aspect of our lives. From the food that we eat to our growing obsession with houseplants, from the pharmaceutical industry to recent meditations on queerness and reproductive freedom, plants are inescapable, offering both practical and metaphoric roots, tendrils, and blossoming ideas about our own

bodies and our engagement within changing social, political, and cultural structures. This course considers the ways that plants (and fungi) have shaped ideas about gender, sexuality, race, health, medicine, capitalism, power, and consciousness from the early modern period to the present, moving chronologically to examine our complicated relationships with the natural world. Working within the (broadly construed and ongoing) colonial context, we follow plants and their collectors, cultivators, and stewards across oceans and continents, charting the rise of plantation agriculture and specious ways of classifying species to twentieth-century focuses on breeding and genetics, attempts to patent plants as medicines, and, in recent years, calls to use plants as models for new (or, perhaps, very old) models for kinship that upturn these very systems of power. HU o Course cr

HSHM 2321b / HIST 1744b, Cultures of Western Medicine 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. HU o Course cr

HSHM 2330a / HIST 1763a, The Politics of Global Health, 1850-Present Staff

This course explores the emergence of global health from the 1851 International Sanitary Conference in Paris to contemporary global health and examines how health initiatives and policies have evolved over the last 150 years. We begin by examining the impact of colonialism on health systems, highlighting the introduction of Western medicine that dismantled local health systems and established healthcare infrastructures that primarily served colonial and elite interests. We then explore the rise of international health organizations, such as the Rockefeller Foundation, the League of Nations Health Organization (LNHO), and the World Health Organization (WHO), and the role of multilateral institutions in shaping global and local health policy in the postwar period. We also evaluate health missions between the Socialist bloc and the Third World and assess the successes and limitations of these alternative visions for promoting health equity. Over the course of the semester, we examine the experiences of health interventions and eradication programs from the perspective of recipient communities and gain an understanding of resistance, contestations, and adoption of these programs. Challenging dominant narratives that portray recipients of global health projects as passive, we evaluate how marginalized communities have variously resisted, appropriated, and shaped global technologies and ideas. Importantly, rather than following a linear North (donor) -to-South (recipient) model, we examine how the contemporary global health landscape emerged as the result of the exchange of ideas, technologies, and local knowledge and expertise between the Global North and South. HU o Course cr

HSHM 2490b / HIST 1129b, The Good Death: A History Deborah Strehle

Can a death be "good" or "bad?" How so? Who gets to decide? Students in this course trace how the idea of "the good death" changed through U.S. history. Together, we consider several questions that have been used to evaluate the "goodness" of a death, asking: Is there a right time to die? Can a good death be planned? Is there a right attitude or spiritual stance to have toward death? Where does a good death take place? What kind of care is best for dying people? What should be done with dead bodies? How does grief factor into the good death? Over the semester, students investigate both aspirational visions of the good death as well as the realities of death

in U.S. history. We analyze cultural, social, and medical factors that influenced the professionalization and medicalization of death into the 21st century. In addition, students are asked to probe their own assumptions about the good death and its corollary, the good life. The course culminates in an essay that features self-reflection as well as rigorous historical analysis. HU o Course cr

HSHM 2520a / AFAM 2150a / ER&M 2534a / HIST 1131a, History of Anti-Black Racism and Medicine Staff

The course traces how anti-Black racism shaped the development of western medicine in the Americas. It examines how ideas of anti-Blackness shaped the work of health practitioners and the experiences of patients. It engages the emergence of racial science and scientific racism, and how they contributed to the production of medical knowledge. More importantly, it centers the voices and experiences of Black people, and the various ways challenged racism through knowledge production and activism. It also addresses the enduring legacies of anti-Black racism in medical practice, and its impact on health inequality. HU o Course cr

*** HSHM 4020b / GMAN 1700b, Literature and the Sciences of Life** Max Phillips

An advanced language course that examines the intersections of literature, biology, and philosophical aesthetics in the German tradition. Refinement of skills in reading comprehension, writing, and speaking. Authors include Alexander von Humboldt, Goethe, Schiller, Novalis, Nietzsche, Rilke, and Benn. Readings and discussion in German. No specialized knowledge of biology is assumed. Prerequisites: L5 or equivalent, or permission of the instructor. L5, HU

*** HSHM 4060a or b / HIST 3150a or b, Healthcare for the Urban Underserved** Sakena Abedin

Exploration of the institutions, movements, and policies that have attempted to provide healthcare for the urban underserved in America from the late nineteenth century to the present, with emphasis on the ideas (about health, cities, neighborhoods, poverty, race, gender, difference, etc) that shaped them. Topics include hospitals, health centers, public health programs, the medical civil rights movement, the women's health movement, and national healthcare policies such as Medicare and Medicaid. WR, HU

*** HSHM 4090a / HIST 3170a, Community Histories: Reproductive Health in New Haven** Megann Licskai

How does a local focus help us to understand the history of reproductive health, and how does reproductive health help us to understand local history? As a project within Yale's Community Histories Lab, students join a team of Yale researchers and community partners committed to producing new knowledge about the history of health in New Haven. Students collaboratively build an archive of reproductive health histories in New Haven. This archive will be a site of academic interest, developed in response to community needs as we consider how to leverage historical research to imagine a better future. The first unit provides students with targeted methodological training in oral historical and traditional archival methods in preparation of the collection of oral histories and compilation of paper archives. The remainder of the seminar engages these methods in project work. Students use their training to build a publicly accessible reproductive health archive housed at Yale, to develop their own research questions coming out of this nascent archive, and to support New

Haven organizations that can use these histories to serve their communities. WR, HU
o Course cr

* **HSHM 4150b / HIST 3195b, Historical Perspectives on Science and Religion** Ivano Dal Prete

The engagement between science and religion from a historical standpoint and a multicultural perspective. The Islamic, Jewish, Buddhist, and Christian traditions; the roots of modern creationism; salvation expectations and the rise of modern science and technology. WR, HU

* **HSHM 4180a / AMST 2253a / ENGL 2853a / HIST 3742a / SOCY 3233a / WGSS 4435a, Queer Science** Juno Richards and Carlo Sariago

Why are there so many studies involving trans brain scans? Can facial recognition technology really tell if you're queer? Why is everyone so obsessed with gay penguins? For that matter, how did science come to be the right tool for defining and knowing sex, gender, and sexuality at all? How does that history influence our collective lives in the present, and what are some alternatives? This course gives students a background in the development of sex science, from evolutionary arguments that racialized sexual dimorphism to the contemporary technologies that claim to be able to get at bodily truths that are supposedly more real than identity. It introduces scholarly and political interventions that have attempted to short-circuit the idea that sex is stable and knowable by science, highlighting ways that queer and queering thinkers have challenged the stability of sexual categories. It concludes by asking how to put those interventions into practice when so much of the fight for queer rights, autonomy, and survival has been rooted in categorical recognition by the state, and by considering whether science can be made queer. HU

* **HSHM 4200a or b, Senior Project Workshop** Megann Licskai

A research workshop for seniors in the HSHM major, intended to move students toward the successful completion of their senior projects and to provide a community for support and for facilitated peer review. Meets periodically throughout the semester for students to discuss stages of the research process, discuss common challenges and practical strategies for addressing them, and to collaboratively support each others' work. The workshop events are structured around the schedule for the fall-to-spring two-term senior project, but students writing one-term projects or spring-to-fall projects also benefit from them, and there is at least one peer review session to support their key deadlines each semester too. Students completing their senior project in the same semester as the workshop have to share their key findings with peers in a celebratory discussion of key ideas, findings, and processes. Students may take both the Fall and the Spring workshop or select the semester that best helps them complete the SP. Students must be seniors in the HSHM major and must be signed up for HSHM 490, 491, or 492 to take this course. ½ Course cr

* **HSHM 4230a / HIST 3175a, Healing Spaces in U.S. History** Deborah Strehle

Where does healing happen? Is place an important factor in health care? How has the design of a space influenced health? What is the relationship between nature and health? Students in this course investigate healing spaces in the history of American medicine and consider how space has been understood to interact with health. We discuss health care in institutions, mobile settings, and natural spaces. From ambulances and hospitals to homes and gardens, we consider the impact of setting on patients and practitioners. The course draws on resources local to New Haven as well

as guest speakers. Students can expect to emerge from the course familiar with several healing spaces in New Haven and with the way space has impacted broader health care. While the course focus on U.S. history, I welcome student contributions addressing healing spaces beyond the U.S. WR, HU

*** HSHM 4240b / HIST 3178b, Health Activism in U.S. History** Deborah Strehle
How have activists changed health care? How have health concerns become political? This course explores health activism and advocacy via case studies drawn from U.S. history from 19th-century sanitary reform to 21st-century environmental justice. Throughout the course, students examine movements, figures, and tactics that have shaped health policy and practice. We analyze the role of grassroots organizations, policy advocacy, and public campaigns in shaping health policy and addressing health inequities. Themes include: the intersection of health and social justice; the role of government and policy in health care; the influence of social movements on health reform; and strategies for effective advocacy and activism. Students engage with a variety of primary sources, including historical documents, speeches, art, and personal narratives, and emerges with an ability to analyze health activism in historical context. WR, HU

*** HSHM 4280a / HIST 3174a, Technology and American Medicine** Deborah Strehle
This course explores the material culture of American medicine. From instruments like thermometers and scalpels to imaging tools like X-rays and MRIs to everyday aids like glasses, prosthetics and fitness tracking apps – technology suffuses medicine today. In this course, we analyze particular technologies as both physical and cultural objects in historical context. In addition to investigating the definition of medical technology, also consider a range of themes and questions, among them: why do some technologies succeed and others fail? What is the relationship between medical technology and power? How do race, class, gender, and sexuality impact the creation and use of medical technology? We pay particular attention to the themes of expertise, authority, and identity. In addition to reading primary and secondary sources, students work closely with materials from the Medical Historical Library. Students can expect to emerge from the course prepared to analyze medical technologies and place them in historical context in American medicine. The course culminates in a student-run virtual exhibition of medical technologies WR, HU

*** HSHM 4330a / HIST 3719a / WGSS 4419a, Gender and Science** Deborah Coen
Exploration of the dual potential of the sciences to reinforce received ideas about gender or to challenge existing sexual and racial hierarchies; the rise of the ideas and institutions of the modern sciences as they have reflected and shaped new notions of femininity and masculinity. WR, HU

*** HSHM 4380a / HIST 3761a, Unnatural History: Colonialism and Inequality in the Making of Nature** Elaine Ayers
Penetrated jungles, “mother” nature, and quests to preserve the redwoods – for hundreds of years, colonial agents have characterized environments in racialized, gendered, sexualized, classist, and ableist terms, anthropomorphizing nature along ongoing systems of inequality. This class traces shifting conceptualizations of nature from the early modern period to the present, focusing on how naturalists and scientists have described, collected, and displayed “new” environments and peoples while building extractive and exploitative natural history collections, from cabinets of curiosity to Yale’s own Peabody Museum. By analyzing methodologies like

classification, conservation, and scientific communication, we will discuss how divisions between the “natural” and “unnatural” were created in western cultures along unequal ideas about human bodies. Critical analyses of sources across multiple disciplines will inform conversations about knowledge production with the goal of interrogating how these power structures have silenced voices and enacted long-lasting violences on both environments and the peoples inhabiting them. Using both primary and secondary sources while conducting original research, students will learn how binary and reductive categories have been used and abused in colonial science and beyond. This class will include visits to museums around Yale’s campus and beyond, with two of your assignments focused on the Peabody Museum. WR, HU

*** HSHM 4410a / HIST 3197a / HSAR 4375a, Museums: Power and Politics** Elaine Ayers

Museums are in a state of crisis. From calls for decolonization and repatriation to protests over human remains collections and unethical donor policies, museums and related cultural institutions find themselves at a crossroads, reckoning with their violent colonial histories while handling ongoing concerns about workers’ rights, systemic inequality, and their role in shaping knowledge in the public sphere. Whether addressing climate change policy, Black Lives Matter protests, fights for unionization, or Indigenous representation, it’s clear that museums are rich sites for critique in the history of science and beyond. How did we get here, and where do we go from here? Beginning with early modern cabinets of curiosity and moving through nineteenth century encyclopedic museums, controversial anatomical collections, and more recent natural history institutions, we investigate how museum politics and power produce knowledge, from the depths of their archives to sensationalized exhibits while questioning what an ethical, holistic museum might look like in the future. Amidst ongoing debates over controversial collections like the Benin Bronzes, human remains stored in universities across the United States, the Metropolitan Museum of Art’s 2023 admission of looting practices, and the American Museum of Natural History’s shallow apology for its eugenic past, the role of museums has expanded beyond the bounds of the academy, stoking universal struggles around human rights, international repatriation policies, and the politics of preservation, display, and loss. We bridge the classroom and the collection, visiting institutions around New Haven, practicing skills like provenance research and ethical handling of difficult objects while working towards a practice-based final project that suggests ways forward for museums and collections.

WR, HU

*** HSHM 4440b / HIST 3750b, Health, Humanitarianism, and Refugee Politics** Gourav Krishna Nandi

How have states historically determined which bodies deserve asylum and care and which can be exposed to deportation, detention, and violence? How have colonial depictions of Asia and Africa as racialized geographies continued to shape migration policies and humanitarian practices throughout the twentieth century? In this seminar, we explore how states and humanitarian actors have utilized technologies of surveillance and control to govern the lives and movements of migrants and refugees throughout the twentieth century. We consider the multifarious reasons why communities, especially throughout Asia, have been mobile since the beginning of the nineteenth century and how this mobility has been shaped through colonial biomedical regimes. Critically interrogating Western images of Global South refugees seeking

asylum in the Global North, we investigate contemporary gendered and racialized images of the “good refugee” or migrant who “deserve” consideration in the modern humanitarian system through biomedical categories. Students are expected to apply historical insights to contemporary debates surrounding surveillance, citizenship, and the global migration regime, challenging prevailing narratives and exploring alternative perspectives on refugee surveillance regimes. WR, HU

*** HSHM 4450b / HIST 3139b, Fetal Histories: Pregnancy, Life, and Personhood in the American Cultural Imagination** Megann Licskai

In our twenty-first-century historical moment, the fetus is a powerful political and cultural symbol. One’s fetal politics likely predicts a lot about how they live their life, vote, worship, and even about how they understand themselves. How, then, has the fetus come to carry the cultural significance that it does? Are there other ways one might think of the fetus? And what is happening in the background when we center the fetus up front? This course examines the many cultural meanings of the fetus in American life: from a clump of cells, to a beloved family member, to political litmus test, and considers the way that these different meanings are connected to questions of human and civil rights, gender relations, bodily autonomy, and political life. We look at the history of our very idea of the fetus and consider how we got here. Each of us may have a different idea of what the fetus is, but every one of those ideas has a particular history. We work to understand those histories, their contexts, and their possible implications for the future of American political life. WR, HU

*** HSHM 4480a / HIST 3177a / WGSS 4448a, American Medicine and the Cold War** Naomi Rogers

The social, cultural, and political history of American medicine from 1945 to 1960. The defeat of national health insurance; racism in health care; patient activism; the role of gender in defining medical professionalism and family health; the rise of atomic medicine; McCarthyism in medicine; and the polio vaccine trials and the making of science journalism. WR, HU

*** HSHM 4550b / AMST 4407b / ER&M 3691b, Eugenics and its Afterlives** Daniel HoSang

This course examines the influence of Eugenics research, logics, and ideas across nearly every academic discipline in the 20th century, and the particular masks, tropes, and concepts that have been used to occlude attentions to these legacies today. Students make special use of the large collection of archives held within Yale Special Collections of key figures in the American Eugenics Society. Students work collaboratively to identify alternative research practices and approaches deployed in scholarly and creative works that make racial power visible and enable the production of knowledge unburdened by the legacies of Eugenics and racial science. HU o Course cr

*** HSHM 4580a or b / HIST 3179a or b, Scientific Instruments & the History of Science** Paola Bertucci

What do scientific instruments from the past tell us about science and its history? This seminar foregrounds historical instruments and technological devices to explore how experimental cultures have changed over time. Each week students focus on a specific instrument from the History of Science and Technology Division of the Peabody Museum: magic lantern, telescope, telegraph, astrolabe, sundial, and more! WR, HU

*** HSHM 4630b / AFAM 3170b / HIST 172Jb, Care Work: Intersectional Pedagogical, Experiential, and Theoretical Approaches to Healing** Ayah Nuriddin

What does it mean to “care”? What models of care work do we need to attend to current crises? What models of care work can we learn from the past? Can we imagine a world where the concept of care, in its most inclusive, embracing, holistic, liberatory form operates as a fundamental value driving our global societies? These are some of the questions that inspired the creation of this course. In this seminar, students explore theoretical feminist, Black feminist, and Crip-of-Color perspectives of care work as well as experiential healing modalities that might interrupt cycles of harm often experienced by care workers. HU

*** HSHM 4640a / HUMS 4183a, Nature and Human Nature** Gary Tomlinson

This course explores the Western conception of the human place in the natural world as it has shifted across four centuries. It features, alongside corollary readings, close study of three classic texts: Galileo's *Dialogue Concerning the Two Chief World Systems* (1632), Giambattista Vico's *New Science* (1744), and Darwin's *Origin of Species* (1859) fundamental texts locating humans in the cosmos, in society, and in natural history, respectively. It finishes with a new work, Terrence Deacon's *Incomplete Nature* (2011), an attempt to explain the emergence of mind from the natural world.

No prerequisites, though the challenging nature of the materials suggests that this course will be aimed mainly at students beyond their first year. HU

*** HSHM 4670b / HIST 3747b / HIST 447J / WGSS 4465b, History of the Body** Ziv Eisenberg

What does it mean to have a “bad hair day?” How should you care for your skin? What happens when you eat a burger and drink wine? How are babies made? What happens when you die? The answers depend not only on who provides them, but also on where and when. This seminar examines historical production of systems of corporeal knowledge and power, as well as the norms, practices, meanings, and power structures they have created, displaced, and maintained. Structured thematically, the course familiarizes students with major topics in the history of the body, health, and medicine, with a particular focus on US history. WR, HU

*** HSHM 4680a / HIST 3260a, Sex, Life, and Generation** 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. WR, HU

HSHM 4700a or b, Directed Reading Elaine Ayers

Readings directed by members of the faculty on topics in the history of science, medicine, or public health not covered by regular course offerings. Subjects depend on the interests of students and faculty. Weekly conferences; required papers.

*** HSHM 4730b / HIST 3703b, Vaccination in Historical Perspective** 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. HU

*** HSHM 4740a / HIST 3415a / SAST 3640a, Health, Medicine and Science in Modern South Asia** Gourav Krishna Nandi

In this seminar, we explore health, medicine, and science in South Asia during the 19th and 20th centuries, and examine how networks and circulations of medical knowledge, local and transnational actors, and anticolonial physicians and scientists shaped colonial modernities and postcolonial nationalism in the region. In the first part, we examine the establishment of colonial medicine in British India, colonial interventions during plague visitations, and approaches to famine and food in the 19th century. We explore how science in colonial India was intertwined with anticolonialism, and examine anticolonial arguments against famines using modern economic sciences. In the second part, we explore pluralist practices of medicine in colonial South Asia and analyze how diverse approaches of colonial Indian medical practitioners blur the categories of "traditional" and "modern" medicine. We then focus on colonial and postcolonial public health interventions – including, regulating poisons and adulterated food, population control, and vaccination campaigns – and their contestations. In the final part, we focus on the postcolonial state and explore how scientific nationalism shaped the postcolonial state's approaches to modernization and development. We examine how Indian physicists and surgeons created and maintained knowledge networks using alliances on both sides of Cold War rivalries." WR, HU

*** HSHM 4900a or b and HSHM 4910a or b, Yearlong Senior Project** Megann Licskai

Preparation of a yearlong senior project under the supervision of a member of the faculty. There will be a mandatory meeting at the beginning of the term for students who have chosen the yearlong senior project; students will be notified of the time and location by e-mail before classes begin. Majors planning to begin their projects who do not receive this notice should contact the senior project director. Students expecting to graduate in May enroll in HSHM 490 during the fall term and complete their projects in HSHM 491 in the spring term. December graduates enroll in HSHM 490 in the spring term and complete their projects in HSHM 491 during the following fall term. Majors planning to begin their projects in the spring term should notify the senior project director by the last day of classes in the fall term. Students must meet progress requirements by specific deadlines throughout the first term to receive a temporary grade of SAT for HSHM 490, which will be changed to the grade received by the project upon the project's completion. Failure to meet any requirement may result in the student's being asked to withdraw from HSHM 490. For details about project requirements and deadlines, consult the HSHM Senior Project Handbook. Students enrolled in HSHM 491 must submit a completed project to the HSHM Registrar no later than 5 p.m. on the due date as listed in the HSHM Senior Project Handbook. Projects submitted after 5 p.m. on the due date without an excuse from the student's residential college dean will be subject to grade penalties. Credit for HSHM 490 only on completion of HSHM 491.

*** HSHM 4930a / AMST 3302a / ER&M 3012a / WGSS 3312a, Technology, Race and Gender** Kalindi Vora

In this course, we discuss technology and the politics of difference through a survey of topics including artificial intelligence, digital labor (crowdsourcing), and robotics and computer science. Materials for study include humanistic and social scientific critique, ethnographies of technology, technical writing and scientific papers, as well as speculative art practices including design, visual art and fiction. What assumptions and politics of imagination govern the design and development of new technologies? What alternative imaginaries, politics, or even speculations, can be identified with a feminist analytic lens? The seminar also includes a practicum component where we practice the politics of speculation through writing and design projects. To do this we study everything from active STEM projects at Yale to speculative fiction and film to think about how structures of race, gender, sexuality, ability, nation, and religious difference inform how we "speculate" or imagine the future through the ways we design and build technological worlds in practice and in fiction. HU, SO