Committee on Conceptual and Historical Studies of Science

Interim Chair (2023-2024)
• Robert J. Richards, History

Chair (2024-2027)
• Fredrik Albritton Jonsson, History

Professors
• Fredrik Albritton Jonsson, History
• Lorraine Daston, Social Thought
• James A. Evans, Sociology
• Adrian Johns, History
• Emily Kern, History
• Karin Knorr Cetina, Sociology and Anthropology
• Joseph Masco, Anthropology
• Salikoko Mufwene, Linguistics
• Thomas Pashby, Philosophy
• Robert J. Richards, History
• Michael Rossi, History
• James T. Sparrow, History
• Kaushik Sunder Rajan, Anthropology

Emeritus Faculty
• Arnold Davidson, Philosophy
• Judith B. Farquhar, Anthropology
• Jan Goldstein, History
• Karl Matlin, Department of Surgery
• Robert Perlman, Pediatrics
• Stephen M. Stigler, Statistics
• William C. Wimsatt, Philosophy

Affiliate Faculty
• William H. Sterner, CHSS

The Committee on Conceptual and Historical Studies of Science (CHSS) is an interdisciplinary graduate program dedicated to advancing social, historical, and philosophical perspectives on science. Its areas of interest are broad, extending across the sciences and from the ancient world to the present day. Its faculty derive from many departments in the University, but particularly from History, Sociology, Anthropology, and Philosophy. We currently have major strengths in the study of evolutionary biology, psychology, and medicine, and in issues of the social activity of science, such as those relating to scientific authority, credibility, communication, and intellectual property. Students in the Ph.D. program have an opportunity to investigate such aspects of the scientific enterprise in depth, within its many rich historical, social, and philosophical contexts. They are also encouraged to grapple with the practices and approaches of science itself.

A brief description of the Committee’s degree requirements is provided below, along with a representative list of courses that have been taught in recent years. For more complete information, you are encouraged to consult the website at http://chss.uchicago.edu/. This site contains an up to date description of faculty research interests, a complete statement of degree requirements, descriptions of individual courses being taught this year, a calendar of events (including meetings of the Committee’s regular Workshop in the History, Philosophy, and Sociology of Science), a list of students who have received Ph.D.s from the Committee with the titles of their dissertations, and more.

Those with questions about the Committee should write to the Administrative Assistant, The Committee on Conceptual and Historical Studies of Science, The University of Chicago, 1126 East 59th Street, Chicago, IL 60637 (bethcalderon@uchicago.edu (bbmackev@uchicago.edu)).
APPLICATION

New students are admitted to the Committee through the Division of the Social Sciences. Applicants will be expected to submit undergraduate transcripts, scores from the general Graduate Record Examination, three letters of recommendation, short descriptions of their interests and/or reasons for wanting to study in CHSS, and a writing sample.

The application process for admission and financial aid for all Social Sciences graduate programs is administered through the divisional Office of the Dean of Students. The Application for Admission and Financial Aid, with instructions, deadlines and department specific information is available online at: https://apply-ssd.uchicago.edu/apply/. Questions pertaining to admissions and aid should be directed to ssd-admissions@uchicago.edu or (773) 702-8413.

Our application process is now entirely online (paperless). All supporting material - including letters of recommendation, transcripts, and writing samples (if required by a specific department) - must be submitted electronically through the online application.

More information about applying to programs in the University of Chicago’s Division of the Social Sciences can be found at https://socialsciences.uchicago.edu/admissions/how-to-apply/.

DEGREE REQUIREMENTS

Every new student in CHSS is assigned an adviser, with whom he or she designs an individual program of study. Because the interests of students within CHSS vary widely, so too do these programs. Yet all students are expected to fulfill certain common requirements. Full and up to date details are given on the website, but the main elements are described here.

Students choose one of the following options:

1. SCIENCE OPTION: The student may earn a master’s degree in a science (here understood to include mathematics, statistics, and social science).

2. PHILOSOPHY OPTION: The student may earn a master’s degree in philosophy.

3. HISTORY OPTION: The student may earn a master’s degree in history.

All students must complete a total of at least fourteen courses at the University for a grade of B or better, including at least five CHSS courses. Students must also take 2 quarters of individual “reading and research” classes with a CHSS faculty member, leading to a research paper to be completed by the end of year 2. This paper must attain a grade of A- or higher. They must maintain at least a B+ average every quarter. Students must take a coherent series of six courses in a scientific area at the University, approved by the Committee, at a level appropriate to their preparation and of an appropriately advanced nature. (The term science here includes social sciences as represented in the University’s Division of the Social Sciences.) This will normally mean that students must take at least some portion of their science work at a graduate level. Note that if a student enters the program with a master’s degree in an appropriate area, the committee determines what level of credit is given for it. Among the coursework of the first two years, students should take three courses offered by the committee: Philosophy of Science, History of Science, and Introduction to Science Studies.

All coursework incompletes remaining at the end of an academic year must be cleared by the start of the next academic year. All students should finish the course requirements (including the R/R courses and research paper) by the end of the 2nd year. Students are generally expected to complete their two qualifying exams by the end of the fall quarter of year 3. Students are generally expected to have passed their proposal defense by the end of the spring quarter of year 3. Every CHSS student submits to the Committee a written report on their progress by May 1 each year. If the student is in candidacy then this report should include a schedule for remaining research and writing. In the spring quarter of every year, the Committee evaluates the progress of all students. If a student is not advancing in line with the expectations, then that student may be placed on probation or asked to leave the program.

Students must then pass two qualifying exams:

1. An oral examination based on readings in the constituent disciplines of CHSS. In general, students choose to focus mainly on one discipline, such as History, Philosophy, Sociology, or Anthropology.

2. An oral examination based on a draft syllabus for an undergraduate course and teaching statement compiled by the student.

The order in which students take the exams does not matter. These exams are, in part, designed by the students themselves. In the case of each exam, the process begins when the student proposes to the Chair two faculty members to serve as an exam committee. At least one of the two must be a member of CHSS. The committees for the two exams may overlap, but they must not be identical. Following the approval of the Chair, and with the commitment of the two faculty members, the student will then work with the committee to develop reading lists for the exams. The administrative assistant of CHSS should be given a copy of the student’s
approved reading list and questions for inclusion in their file. The student arranges the exact day and time of the exam in consultation with the members of the exam committee.

After all of the above requirements have been satisfied, a student may form a dissertation committee. These normally consist of three faculty members, with one designated as the chair. At least two members of the committee, one of them the chair, must be members of CHSS. The student chooses the committee, subject to the approval of the Chair of CHSS and the agreement of the faculty involved. Once the committee has been formed, the student will work with its members to develop a dissertation proposal. The student will defend the proposal in a proposal hearing. The dissertation proposal defense should happen by the end of spring quarter of year 3. The exact day and time of the hearing should be arranged by the student in consultation with the members of the committee and the Chair of CHSS. The student must inform the CHSS administrative assistant of the day and time chosen, and do so sufficiently far in advance that it is possible for the administrative assistant to notify the faculty, and get copies of the proposal to them, a full two weeks in advance of the hearing. If the proposal is approved at the hearing, the student will be considered to have advanced to “Ph.D. candidacy.” At this point, a student will proceed to write the dissertation itself.

At this point the student writes a dissertation proposal, and defends it at a hearing before his or her dissertation committee. He or she is then considered to have advanced to Ph.D. candidacy, and proceeds to write the dissertation itself.

Once the student submits a completed dissertation, and the chair of the dissertation committee secures agreement from all the committee members that it is ready to be defended, a dissertation defense may be scheduled. The exact day and time should be arranged by the student in consultation with the members of the committee and the Chair of CHSS. The student must inform the CHSS administrator of the day and time chosen, and give the administrative assistant both a copy of the dissertation and a short written summary (on the order of 5 to 10 pages). He or she must do so sufficiently far in advance that it is possible for the administrative assistant to notify the faculty, and get copies of the summary to them, a full two weeks in advance of the defense. The faculty present at the defense make the final decision on whether to accept the dissertation.

COURSES

The department website offers descriptions of representative courses offered in recent years: https://chss.uchicago.edu/content/courses (for specific class schedule information).

CONCEPTUAL AND HISTORICAL STUDIES OF SCIENCE COURSES

CHSS 30100. Wit & Wisdom in 18th-Century Literature. 100 Units.
TBD
Equivalent Course(s): ENGL 36003

CHSS 30400. Music & Science in the Early Modern Period. 100 Units.
TBD
Equivalent Course(s): MUSI 43705

CHSS 30506. Cities, Space, Power: Introduction to urban social science. 100 Units.
This lecture course provides a broad, multidisciplinary introduction to the study of urbanization in the social sciences. The course surveys a broad range of research traditions from across the social sciences, as well as the work of urban planners, architects, and environmental scientists. Topics include: theoretical conceptualizations of the city and urbanization; methods of urban studies; the politics of urban knowledges; the historical geographies of capitalist urbanization; political strategies to shape and reshape the built and unbuilt environment; cities and planetary ecological transformation; post-1970s patterns and pathways of urban restructuring; and struggles for the right to the city.
Equivalent Course(s): CCCT 30506, SOCI 30506, SOCI 20506, HIPS 20506, ENST 20506, KNOW 30506, PLSC 20506, ARCH 20506, CHST 20506, PLSC 30506, CEGU 20506

CHSS 30574. Sociology Structure and Agency. 100 Units.
The subtitle of this course may very well be How to Think Sociologically. It's required of sociology majors but open to students majoring in other disciplines, including economics, STEM fields, and the humanities. The aim of the course is to impart a distinctly sociological perspective and equip students with sociological modes of explanation (as opposed to, say, economic or biological ones) in the belief that such a framework will enrich their understanding of the world. Our focus will be on unpacking two fundamental concepts in sociology, social structure and agency, and examining them in relation to one another. We will consult both classical and contemporary sources and discuss real-world applications. While the readings include dense social theory, every effort will be made to make the ideas at stake accessible to a non-specialized audience. The course will be run like a seminar and discussion intensive. It is imperative that students complete the readings on time and participate actively in discussions.
Equivalent Course(s): HIPS 20574, SOCI 20574, SOCI 30574

CHSS 30576. Social Theory for the Digital Age. 100 Units.
Society rearranges itself, though we don’t always know where it is heading. When the postmodern moment had arrived in the 1980s it perplexed social theorists, hence its characterization as simply a "post"-stage of
modernity. Digitization is one answer to the question of direction of change in the last decades. In this class, we
take the ongoing transformations that we attribute to digital media as a starting point to ask what challenges they
provide to social theory that may force us to reconsider some of our most basic concepts and premises. We will
understand the term digital age broadly to refer to the rise of algorithms, sensors, (big) data, machine learning,
and computational methods, all developments that swirl in and around the Artificial Intelligence scene and
intersect with and replace purely human relations. The class gives particular attention to concepts such as action
and interaction, embodiment, social situations, subjectivity and autonomy, as well as society as communication.
Equivalent Course(s): SOCI 20576, SOCI 30576, HIPS 20576

CHSS 30806. Death and Disease in the Ancient World. 100 Units.
This course examines aspects of death and disease in the Greco-Roman world through a wide range of evidence
and historical approaches. We will focus on the major problems of individual and public health in these cultures,
how they understood health philosophically, scientifically, and culturally and what measures they took to ensure
it (or not). Topics will range from bacterial infections to environmental pollutants to personal hygiene. We will
also examine how many aspects of ancient medicine were practiced and theorized. Later in the quarter we
will consider various aspects of death: logistical and practical, cultural and religious.
Equivalent Course(s): CLCV 24019, HIPS 20806, HIST 30806, HIST 20806, CLAS 34019

CHSS 30924. Science, Modernity, and Anti-Modernity. 100 Units.
No description available
Equivalent Course(s): HIST 44905, SCTR 30924

CHSS 30925. The Humanities as a Way of Knowing. 100 Units.
Despite intertwined histories and many shared practices, the contemporary humanities and sciences stand in
relationships of contrast and opposition to one another. The perceived fissure between the "Two Cultures" has
been deepened by the fact that the bulk of all history and philosophy of science has been devoted to the natural
sciences. This seminar addresses the history and epistemology of what in the nineteenth century came to be
called the "sciences" and the "humanities" since the Renaissance from an integrated perspective. The historical
sources will focus on shared practices in, among others, philology, natural history, astronomy, and history. The
philosophical source will develop an epistemology of the humanities: how humanists know what they know.
Equivalent Course(s): PHIL 20925, KNOW 40303, CLAS 37316, PHIL 30925, SCTR 30925, HIST 39517, HIST 29517

CHSS 30927. Knowledge as a Platter: Comparative Perspectives on Knowledge Texts in the Ancient World. 100
Units.
In various ancient cultures, sages created the new ways of systematizing what was known in fields as diverse
as medicine, politics, sex, dreams, and mathematics. These texts did more than present what was known;
they exemplified what it means to know - and also why reflective, systematic knowledge should be valued
more highly than the knowledge gained from common sense or experience. Drawing on texts from Ancient
India, Greece, Rome, and the Near East, this course will explore these early templates for the highest form
of knowledge and compare their ways of creating fields of inquiry: the first disciplines. Texts include the
Arthashastra, the Hippocratic corpus, Deuteronomy, the Kama Sutra, and Aristotle’s Parva naturalia.
Equivalent Course(s): SALC 30927, HREL 30927, KNOW 31415, SCTR 30927

CHSS 30928. Thinking the Present through the Past: Classic Works of History since 1750. 100 Units.
As proudly empirical as the sciences, as interpretive as the humanities, and as analytical as the social sciences,
history as the pursuit of knowledge about the past resists classification. Because all history is written through
the lens of the present, most works of history cease to be read after a generation, especially during the modern
period, as the pace of change accelerated. In this seminar we will read some of the exceptions, including works
by Kant, Tocqueville, Michelet, cCassirer, Huizinga, Lovejoy, and Frances Yates, to understand how powerful
vision of the past can transcend its own present.
Equivalent Course(s): HIST 45002, SCTR 30928, KNOW 30928

CHSS 30929. The Strange World of Francis Bacon. 100 Units.
Francis Bacon (1561-1626) was a statesman, natural philosopher, essayist, and one of the most original thinkers
of a spectacularly original age. Hailed as a visionary of modern science, reviled for his politics, praised for his
prose style, admired for his legal reasoning, and skewered as a naive empiricist, Bacon eludes modern categories.
This seminar will look at his thought in the round. Texts include The Great Instauration, the New Organon, the
Essays, and New Atlantis.
Equivalent Course(s): HIST 45003, SCTR 30929

CHSS 30936. Wonder, Wonders, and Knowing. 100 Units.
In wonder is the beginning of philosophy,” wrote Aristotle; Descartes also thought that those deficient in
wonder were also deficient in knowledge. But the relationship between wonder and inquiry has always been an
ambivalent one: too much wonder stupefies rather than stimulates investigation, according to Descartes; Aristotle
explicitly excluded wonders as objects of inquiry from natural philosophy. Francis Bacon called wonders “broken
knowledge.” Since the sixteenth century, scientists and scholars have both cultivated and repudiated the passion
of wonder; On the one hand, marvels (or even just anomalies) threaten to subvert the human and natural
orders; on the other, the wonder they ignite inquiry into their causes. Wonder is also a passion tinged with the
numinous, and miracles have long stood for the inexplicable in religious contexts. Above all, wonders demand
attention and interpretation. This seminar will explore the long, vexed relationship between wonder, knowledge, and belief in the history of philosophy, science, and religion.

Equivalent Course(s): PHIL 30926, PHIL 20926, KNOW 30926, HIST 35318, RLST 28926, SCTH 20926, SCTH 30926, HIST 25318

CHSS 30961. The Values of Attention. 100 Units.
Attention confers value - aesthetic, moral, epistemic, and now monetary value - upon whatever it singles out from the stream of experience. This seminar explores the long history of the theories and practices of attention in philosophy, religion, science, psychology, and the arts. Guiding questions include what objects are deemed worthy of attention and why, extreme states of attention such as religious contemplation or scientific observation, the schooling of attention through practices such as reading and web-surfing, theories of how attention works, and pathologies of attention.

Equivalent Course(s): SCTH 30961, HIST 45004

CHSS 30962. Nature's Authority. 100 Units.
From ancient times to the present, nature’s authority has been invoked by revolutionaries and reactionaries alike to justify social, political, and economic arrangements made by humans. Despite much trenchant philosophical criticism, nature seems to an irresistible resource in very human debates about power, work, sex, money, and much else. This seminar asks why this tradition has been so persistent and pervasive and where nature’s authority comes from. Readings will emphasize primary sources, from Aristotle to contemporary environmentalists. This course will meet two times per week for 3 hours, during the 1st five weeks of the quarter, March 28 - April 27.

Equivalent Course(s): SCTH 30962, HIST 45005, HIPS 20962

CHSS 31000. Good Hands: Research Ethics. 100 Units.
Basic research is intended to explore and evaluate truth claims at the edge of our understanding of the natural and physical world, and it is this very quality that renders it useful as science. Yet, this often creates significant ethical questions for the research as well as for the social order in which all research takes place. Often, courses in research ethics focus on the establishment and enforcement of canonical rules of behavior, where the goal is to inform the investigator about how to follow these established rules. This course will turn to a different set of problems in research ethics. We will begin with a foundation in the history of research ethics, reviewing the key cases that shaped the policies about which we have consensus, (human and animal subject protections; authorship, etc.) will consider the problems about which there is not yet a clear ethical course: what are the limits of human mastery? Why is research deception so prevalent? Are there experiments which are impermissible and why? What is the obligation of the researcher toward their community? How can we think clearly and ethically in situations of deep uncertainty? We will consider how moral philosophy as well as theological arguments have shaped research science and reflect on the nature, goal and meaning of basic and translational research in modernity.

Equivalent Course(s): KNOW 31001, BMSC 31000, RETH 31000

CHSS 31108. Time After Physics. 100 Units.
This course provides a historical survey of the philosophy of time. We begin with the problems of change, being and becoming as formulated in Ancient Greece by Parmenides and Zeno, and Aristotle’s attempted resolution in the Physics by providing the first formal theory of time. The course then follows theories of time through developments in physics and philosophy up to the present day. Along the way we will take in Descartes’ theory of continuous creation, Newton’s Absolute Time, Leibniz’s and Mach’s relational theories, Russell’s relational theory, Broad’s growing block, Whitehead’s epochal theory, McTaggart’s A, B and C theories, Prior’s tense logic, Belnap’s branching time, Einstein’s relativity theory and theories of quantum gravity. (B) (II)

Equivalent Course(s): PHIL 21108, KNOW 21108, KNOW 31108, HIPS 21108, PHIL 31108

CHSS 31202. Goethe: Literature, Science, Philosophy. 100 Units.
This lecture-discussion course will examine Johann Wolfgang von Goethe’s intellectual development, from the time he wrote Sorrows of Young Werther through the final states of Faust. Along the way, we will read a selection of Goethe’s plays, poetry, and travel literature. We will also examine his scientific work, especially his theory of color and his morphological theories. On the philosophical side, we will discuss Goethe’s coming to terms with Kant (especially the latter’s third Critique) and his adoption of Schelling’s transcendental idealism. The theme uniting the exploration of the various works of Goethe will be unity of the artistic and scientific understanding of nature, especially as he exemplified that unity in “the eternal feminine.” (B) (IV)

Equivalent Course(s): HIPS 26701, FNDL 25315, GRMN 35304, HIST 35304, GRMN 25304, HIST 25304, PHIL 30610, KNOW 31302, PHIL 20610

CHSS 31302. Radicals in Early Modern Britain. 100 Units.
Throughout the 1640s and 1650s it seemed to many in England that the world they had grown up in—a world characterized by patriarchy and hierarchy, by inequality and privilege, by an established church and a monarchical state—was being turned upside down. Against a backdrop of conflict between Parliament and Crown, a power vacuum had opened, and in this vacuum both organized radical groups and individual visionaries saw the opportunity to make a revolution. The goals of these radicals were diverse, and often in contradiction. Some wanted the creation of a strict republic, even a democracy; some sought the elimination of private property; others the abolition of marriage; still others the creation of a millenarian Fifth Monarchy led by King Jesus himself. What they shared was a common desire to remake England into a fundamentally
different society, and a failure to achieve their goals. Or was it a failure? Today the voices of these radicals have disappeared from most histories of modern political thought. And yet this forgotten corpus of writing reveals a very different early modern world, with strains of communism, proto-feminism, and dissent that fed the imaginations of radicals for centuries, including many well beyond England. This seminar introduces students directly to the ideas of the seventeenth-century English radicals. They will engage with the history and historiography of the English Revolution, read a variety of primary sources, and complete a research paper.
Equivalent Course(s): HIST 21302, HIPS 21302, HIST 31302

CHSS 31404. Britain in the Age of Steam 1783-1914. 100 Units.
In the Victorian era, Britain rose to global dominance by pioneering a new fossil-fuel economy. This course explores the profound impact of coal and steam on every aspect of Victorian society, from politics and religion to industrial capitalism and the pursuit of empire. Such historical investigation also serves a second purpose by helping us see our own fossil-fuel economy with fresh eyes through direct comparison with Victorian energy use. Assignments include short essays based on energy “field work” and explorations in past and present material culture.
Equivalent Course(s): KNOW 31410, CEGU 21404, HIST 21404, HIST 31404, HIPS 21404, ENST 21404

CHSS 31406. Britain 1760-1880: The Origins of Fossil Capitalism. 100 Units.
Britain rose to global dominance after 1760 by pioneering the first fossil-fuel economy. This course explores the profound impact of coal and steam on every aspect of British society, from politics and religion to industrial capitalism and the pursuit of empire. Such historical investigation also serves a second purpose by helping us see our own fossil-fuel economy with fresh eyes through direct comparison with Victorian energy use. How much does the modern world owe to the fossil capitalism of the Victorians? Assignments include short essays that introduces students to primary sources (texts, artifacts, and images) and a longer paper that examines in greater depth a specific aspect of the age of steam.
Equivalent Course(s): HIST 31406, HIST 21406, HIPS 21406, CEGU 21406, CEGU 31406

CHSS 31413. Sex and Enlightenment Science. 100 Units.
What do a lifelike wax woman, a birthing dummy, and a hermaphrodite have in common? This interdisciplinary course seeks answers to this question by exploring how eighteenth-century scientific and medical ideas, technologies, and practices interacted with and influenced contemporary notions of sex, sexuality, and gender. In our course, the terms “sex,” “Enlightenment,” and “science” will be problematized in their historic contexts using a variety of primary and secondary sources. Through these texts, as well as images and objects, we will see how emerging scientific theories about sex, sexuality, and gender contributed to new understandings of the human, especially female, body. We will also see how the liberating potential of Enlightenment thought gave way to sexual and racial theories that insisted on fundamental human difference. Topics to be covered include theories of generation, childbirth, homosexuality, monstrosities, race and prosecution, and hermaphrodites and questions about the “sex” of the enlightened scientist and the gendering of scientific practices.
Equivalent Course(s): HIPS 21413, KNOW 21413, HIST 22218, GNSE 21413

CHSS 32000. Introduction to Science Studies. 100 Units.
This course provides an introduction to the interdisciplinary study of science, medicine, and technology. During the twentieth century, sociologists, historians, philosophers, and anthropologists raised original, interesting, and consequential questions about the sciences. Often their work drew on and responded to each other, and, taken together, their various approaches came to constitute a field, “science studies.” The course furnishes an initial guide to this field. Students will not only encounter some of its principal concepts, approaches and findings, but will also get a chance to apply science-studies perspectives themselves by performing a fieldwork project. Among the topics we may examine are: the sociology of scientific knowledge and its applications; actor-network theories of science; constructivism and the history of science; and efforts to apply science studies approaches beyond the sciences themselves.
Equivalent Course(s): KNOW 31408, SOCI 40137, HLTH 22001, ANTH 32305, HIPS 22001, HIST 44906

CHSS 32011. Data: History and Literature. 100 Units.
Data is a notion that seems to characterize our contemporary world. Digital revolutions, artificial intelligence, and new forms of management and governance all claim to be data-driven. This course traces the origins of these trends to the nineteenth century, when new statistical knowledges and literary traditions emerged. Moving across disciplinary boundaries, we will analyze the ways in which practices of observation and calculation produced data on populations, crime, and economies. Likewise, the literature of this period reflected the ways that data shaped subjective experience and cultural life: the rise of the detective novel transformed the world into a set of signs and data points to interpret, while Balzac’s Human Comedy classified individuals into types. Drawing on these historical and humanistic perspectives, students will have the opportunity to measure and analyze their own lives in terms of data-as well as think critically about the effects of these knowledge practices.
Equivalent Course(s): HIPS 22011, PPHA 32011, SCTX 23011, KNOW 22011, STAT 36711, SOCI 30518, KNOW 32011, ENGL 32011, SOCI 20518

CHSS 32012. Technologies of Race Making. 100 Units.
This course considers the intersections between technology, science, and race. It explores how technologies have been developed and used to assign racial meaning to people’s identities and bodies and how this has impacted economic, political, and social power structures. We will read studies relating to historical and present-day technologies and discuss topics such as racial science, phrenology, biometry, surveillance and policing, artificial
intelligence and automation, and data production and reuse. A major theme that runs through the course is the practice of race-making, how biological race is enacted and made relevant in specific technological practices. Which assumptions and expectations about human variation are built into the technologies? What are the effects of its use in practice? How does race making configure into more durable forms, such as standards, databanks, and protocols? This class will be bi-modal, with in class and online options.

Equivalent Course(s): CRES 32012, KNOW 32012, HIPS 22102, ANTH 33336, SOCI 30325, KNOW 22012

CHSS 32100. Space and Time. 100 Units.
This course is an introduction to some traditional philosophical problems about space and time. The course will begin with a discussion of Zeno's paradoxes. We will then look at the debate between Newton and Leibniz concerning the ontological status of space and time, and will examine reactions to this debate by physicists such as Mach. We will then go on to discuss the question of what sense is to be made of the claim that space is curved, looking at the work of Einstein. Students will be introduced to the basics of the special and general theories of relativity at a qualitative level. If time permits, we will also look at questions about the multiverse, and/or Boltzmann's conception of the arrow of time. (B) (II)
Equivalent Course(s): PHIL 32100, HIPS 22100, PHIL 22100

CHSS 32205. Taking Back the Land: Anthropology, Geography & Ethnoscience for Land Justice. 100 Units.
In a world of settler property regimes, corporate holdings and national parks, how are communities reclaiming the lands they've lost? National parks overturned; indigenous community conservation areas established; food deserts restored with expanding networks of community gardens; the last decade has seen an eruption of opportunities for land justice amidst continuing challenges from ongoing processes of capitalism, colonialism, and climate change. This course offers a wholistic anthropological approach to land justice activism that begins with strategies for building collaborations, before looking at tools to help assert claims over territories and resources, and finally, exploring ways of restoring reclaimed lands with new foodways, forests, and community governance. Alongside critical readings and guest teachings from land justice activists in Southeast Asia and North America, the course will examine how a diversity of citizen science tools are being combined with indigenous, anthropological, geographic, and ecological methods to formulate a toolkit for land justice activism and community land/resource management. From counter mapping territory with remote sensing to effective strategies used to block mining projects; from indigenous conservation planning to guerrilla gardening: this course will explore different approaches to reclaiming lands and resources.
Equivalent Course(s): ANTH 32207, MAPS 32205, HIPS 22205, GLST 22205, ENST 22205, ANTH 22206, CRES 23305

CHSS 32206. Ontologies of Illness. 100 Units.
In a historical moment marked by chronic illness, pandemic, and risk surveillance, the politics of illness and disease are paramount. How do we know when we are ill? How are illnesses validated, or invalidated, by society? How have technologies changed the way we recognize, treat, and experience states of health and illness? In this course, students will examine ontologies of illness, that is the way that illnesses and diagnoses are enacted, made visible, and managed through diagnostic and medical practices and in legal–social arenas. Drawing on scholarship from medical sociology, anthropology, philosophy, and science and technology studies, this seminar will especially attend to relations of power that underpin the politics of health and illness. Students will analyze how illness categories and labels are created, negotiated, managed, resisted, and also sometimes dismantled. This course integrates interdisciplinary perspectives on ontologies of illness. Students will engage scholarship from social sciences and medicine and use popular media (documentary films, news stories, podcasts) sources to interrogate how illness is defined, diagnoses are achieved, and how everyday people experience illness. This course responds to the contemporary moment, providing students with theoretical and empirical scholarship to critically analyze contemporary biomedicine.
Equivalent Course(s): ANTH 32209, KNOW 32206, CHDV 32206, SOCI 30586, GNSE 32205

CHSS 32277. The Philosophy of Thomas Kuhn. 100 Units.
Thomas Kuhn was both an historian and a philosopher of science, with broader interests in philosophical issues pertaining to the nature of language, truth and knowledge - and, in particular, pertaining to questions concerning the possibility of communicability, commensurability, and inter-translatability across radically divergent conceptual schemes, theoretical frameworks, or grammatical/linguistic structures. This course will be devoted to a close examination of the treatment of these topics in Kuhn's work. For purposes of orientation, we will begin with several class meetings in which we read his classic work The Structure of Scientific Revolutions, first published in 1962, along with some the central texts which figured in the controversies that book ignited in connection with the aforementioned topics. We will then examine some of the second thoughts Kuhn himself expressed concerning that work in scattered essays written between 1969 and 1977 (some of which are collected in The Essential Tension). The second half of the course will be on Kuhn's work from 1978 until his death in 1996, starting with the essays collected in The Road Since "Structure", and further developed in The Presence of Science Past (his 1987 Shearman Lectures) and The Plurality of Worlds (his final unfinished magnum opus). (B) (II)
Equivalent Course(s): PHIL 32277, HIPS 22277, PHIL 22277

CHSS 32500. Modal Logic. 100 Units.
TBD
CHSS 32503. Capturing the Stars: Exhibiting the History of Women at Yerkes Observatory in early 20th C America. 100 Units.

Capturing the Stars,” the exhibit, that will illuminate the history of women at Yerkes Observatory and demonstrate how their labor contributed to the advancement of astronomy and astrophysics in Fall 2023. In this experimental and hands-on course, students will actively participate in the creation of this physical exhibit for the Special Collections Research Center and its digital counterpart. Students will begin by learning about the history of women in science, the social, economic, and cultural history of early twentieth-century America, as well as the history of astronomy and astrophysics. They will then develop skills in historical research, exhibition development, community outreach, and science communication while working on final projects to be featured in the exhibit. No prior historical, scientific, or museum experience is required for this course. Students will learn how to conduct historical research and how to communicate with a public audience by contributing to the production of a physical exhibit on the history of women at Yerkes Observatory with an ambitious digital footprint. This highly experimental class will move beyond the confines of a traditional history seminar by involving students in the development and execution of an exhibit on the history of women at Yerkes Observatory.

Equivalent Course(s): KNOW 32203, GNSE 32510, HIST 37802, HIPS 22203, HIST 27802, GNSE 22510

CHSS 32504. Science, Governance, and the Crisis of Liberalism. 100 Units.

In the era of “post-truth” it has become common to link a crisis of scientific authority with a crisis of liberalism. Democracies around the world are under threat, this reasoning goes, in part because of an attack on scientific truth. But what does liberalism - as political culture and as a form of governance - need (or want) from science? Depending where you look, the answer might appear to be facts, truth, a model 'public sphere,' an ethic of objectivity, tactics for managing risk and uncertainty, or technologies of population management (to name a few). In addition to exploring the complex historical relationship between science and liberalism in the modern era, this course will critically assess how the history of science and the history of political thought have theorized truth and governance. We will examine what models of “coproduction” and “social construction” - nearly ubiquitous in the historiography of modern science - fail to capture about the histories of science and state power. We will also think about how political and intellectual historians’ theories of truth and mendacity in politics might be enriched by more attention to scientific knowledge in both its technical and epistemological forms. This course focuses on 19th- and 20th-century Europe and the United States in global perspective, and readings will draw from political theory, history, economic thought, the natural and human sciences, and critical theory.

Equivalent Course(s): KNOW 32204, HIST 28308, HIPS 22204, HIST 38308

CHSS 32708. Planetary Britain, 1600-1900. 100 Units.

What were the causes behind Britain’s Industrial Revolution? In the vast scholarship on this problem, one particularly heated debate has focused on the imperial origins of industrialization. How much did colonial resources and markets contribute to economic growth and technological innovation in the metropole? The second part of the course will consider the global effects of British industrialization. To what extent can we trace anthropogenic climate change and other planetary crises back to the environmental transformation wrought by the British Empire? Topics include ecological imperialism, metabolic rift, the sugar revolution, the slave trade, naval construction and forestry, the East India Company, free trade and agriculture, energy use and climate change.

Equivalent Course(s): KNOW 22708, HIST 22708, HIST 32708, KNOW 32808, HIPS 22708, ENST 22708

CHSS 32709. Introduction to Philosophy of Quantum Mechanics. 100 Units.

In this class we examine some of the conceptual problems associated with quantum mechanics. We will critically discuss some common interpretations of quantum mechanics, such as the Copenhagen interpretation, the many-worlds interpretation and Bohmian mechanics. We will also examine some implications of results in the foundations of quantum theory concerning non-locality, contextuality and realism. (B) (II)

Equivalent Course(s): PHIL 32709, HIPS 22709, PHIL 22709, KNOW 22709

CHSS 32710. Philosophical Issues in Quantum Mechanics. 100 Units.

TBD

Equivalent Course(s): PHIL 22710, PHIL 32710

CHSS 32800. Experiencing Madness: Empathic Methods in Cultural Psychiatry. 100 Units.

This course provides students with an introduction to the phenomenological approach in cultural psychiatry, focusing on the problem of “how to represent mental illness” as a thematic anchor. Students will examine the theoretical and methodological groundings of cultural psychiatry, examining how scholars working in the phenomenological tradition have tried to describe the lived experiences of various forms of “psychopathology” or “madness.” By the end of the course, students will have learned how to describe and analyze the social dimension of a mental health experience, using a phenomenologically-grounded anthropological approach, and by adopting a technical vocabulary for understanding the lived experiences of mental illness (for instance, phenomena, life-world, being-in-the-world, intentionality, epoché, embodiment, madness, psychopathology, melancholia/depression, schizophrenia, etc). In addition, given the ongoing problematic of “how to represent mental illness,” students will also have the opportunity to think through the different ways of presenting their analysis, both in the form of weekly blog entries and during a final-week mock-workshop, where they will showcase their work in a creative medium appropriate to that analysis.

Equivalent Course(s): ANTH 35135, HIPS 22800, CHDV 32822, MAPS 32800, ANTH 24355
CHSS 32805. Nature/Culture. 100 Units.
Exploring the critical intersection between science studies and political ecology, this course interrogates the contemporary politics of "nature." Focusing on recent ethnographies that complicated our understandings of the environment, the seminar examines how conceptual boundaries (e.g., nature, science, culture, global/local) are established or transgressed within specific ecological orders.
Equivalent Course(s): HIPS 26203, ANTH 43805, ANTH 23805

CHSS 32900. History of Statistics. 100 Units.
This course covers topics in the history of statistics, from the eleventh century to the middle of the twentieth century. We focus on the period from 1650 to 1950, with an emphasis on the mathematical developments in the theory of probability and how they came to be used in the sciences. Our goals are both to quantify uncertainty in observational data and to develop a conceptual framework for scientific theories. This course includes broad views of the development of the subject and closer looks at specific people and investigations, including reanalyses of historical data.
Equivalent Course(s): HIPS 25600, STAT 36700, STAT 26700

CHSS 32905. Topics in the History of Attention. 100 Units.
Our data," said a recent social critic, "is the oil of the twenty-first century." In these infinite reserves, perhaps no data is more "ours" than the data we generate simply by paying attention to some things over other things. This particular feature of how our minds work has become the natural resource supply for the vastly profitable attention economy. But hasn't it always been thus? In this course we will explore how something every human has always had becomes a new resource and a new problem from one historical moment to another. We will pursue our quanry with zealous particularism and zealous universalism, by tracking discourses of attention across several recurring themes: questions of autonomy and choice; problems of overabundance; forms of collective attention, trained attention, and pathological attention including pathologies of excess, deficiency, and erroneous attention. Throughout the course we will ask what problems of attention say about the cultures and societies that produce them, and how all problems of attention might be different historical attempts to come to terms with human limitation and human potential.
Equivalent Course(s): HIPS 29205, MAPS 32905

CHSS 33300. Introduction to Philosophy of Science. 100 Units.
We will begin by trying to explicate the manner in which science is a rational response to observational facts. This will involve a discussion of inductivism, Popper's deductivism, Lakatos and Kuhn. After this, we will briefly survey some other important topics in the philosophy of science, including underdetermination, theories of evidence, Bayesianism, the problem of induction, explanation, and laws of nature. (B) (II)
Equivalent Course(s): KNOW 32000, PHIL 22000, HIPS 22000, HIST 35109, PHIL 32000, HIST 25109

CHSS 33500. Introduction to Logic. 100 Units.
An introduction to the concepts and principles of symbolic logic. We learn the syntax and semantics of truth-functional and first-order quantificational logic, and apply the resultant conceptual framework to the analysis of valid and invalid arguments, the structure of formal languages, and logical relations among sentences of ordinary discourse. Occasionally we will venture into topics in philosophy of language and philosophical logic, but our primary focus is on acquiring a facility with symbolic logic as such.
Equivalent Course(s): HIPS 20700, PHIL 30000, PHIL 21000

CHSS 33501. Historical Highlights in Astronomy from Hipparcos to Hubble. 100 Units.
This course will focus on important developments in our understanding of the universe from ancient Greeks to modern Geeks, taught from the perspective of a scientist. Even more interesting than the advances were the missteps and false assumptions that impeded progress. The course grade will be based on a 45-minute presentation about a relevant person or historical discovery.
Equivalent Course(s): ASTR 33500, ASTR 23500

CHSS 33507. Scientific Inference. 100 Units.
In this course we investigate the nature of inference in the scientific setting. Topics include induction, abduction, Bayesianism, and theories of hypothesis testing. Close attention will be paid to the question of what contribution formal techniques from probability and statistics make to our understanding of justified inference. (B) (II)
Equivalent Course(s): PHIL 23507, PHIL 33507, HIPS 23507

CHSS 33519. The Arts of Number in the Middle Ages: The Quadrivium. 100 Units.
Alongside the arts of language (grammar, rhetoric, and logic), medieval students would encounter the arts of number: arithmetic, the study of pure number; geometry, number in space; music, number in time; and astronomy, number in space and time (in Stratford Caldecott's formulation). In this course, we will be following this medieval curriculum insofar as we are able through some of its primary texts, many only recently translated, so as to come to a better appreciation of the way in which the study of these arts affected the development of the medieval European intellectual, scientific, and artistic tradition. This is a companion course to "The Arts of Language in the Middle Ages: The Trivium," but the two courses may be taken in either order.
Equivalent Course(s): MDVL 23519, HIPS 23519, HIST 33519, FNDL 25688, HIST 23519
CHSS 33600. Intermediate Logic. 100 Units.
This course provides a first introduction to mathematical logic for students of philosophy. In this course we will prove the soundness and completeness of deductive systems for both propositional and first-order predicate logic. (B) (II)
Equivalent Course(s): PHIL 39600, HIPS 20500, PHIL 29400

CHSS 34200. The Nuclear Age. 100 Units.
This seminar examines the history of nuclear science, technology, and politics since World War II. The invention of atomic weapons transformed the international security landscape in the middle of the last century, yet most nuclear arms have never been deployed in conflict. This course encourages students to consider the roles of ideas, knowledge, culture, and secrecy in the development and deployment of technologies often considered as quintessential material. It asks how nuclear science and technology both reflected and informed social landscapes, intersecting in crucial, often surprising ways with issues of gender, race, and class. What kinds of people in which places have had access to atomic knowledge, and to what ends? Ranging across national contexts and through social layers that intersect with nuclear industries, we will consider the perspectives of victims / survivors, scientists, workers, environmentalists, miners, diplomats, and other people. Students will encounter a multifaceted approach to the Nuclear Age, including how its promise and peril have been represented and contested, into the present time.
Equivalent Course(s): KNOW 32200, HIST 38608

CHSS 34201. Genetics In Evol Perspective. 100 Units.
TBD
Equivalent Course(s): BIOS 29288, HIPS 24101

CHSS 34215. The History of the Book in East Asia: From Bamboo to Webtoon. 100 Units.
This seminar offers an overview of the development and history of the ‘book’ and its physical forms, broadly conceived, in East Asia from ancient times to the present. Drawing on recent scholarship, selected primary sources, and rare books housed within the library system, this course familiarizes students with the evolution of the book and methods of book production in China, Korea, and Japan, the principles and practices of material bibliography and the application of such to physical and digital objects, and selected topics salient to the social and cultural meanings of books: authorship, the book trade, reading, censorship, and more. Assignments include a short paper, a short presentation, and a longer final paper. All readings in English, but knowledge of East Asian history or languages helpful.
Equivalent Course(s): HIPS 24215, EALC 24225, HIST 24215, EALC 34225, HIST 34215

CHSS 34300. A History of Cell and Molecular Biology. 100 Units.
This course will trace the parallel histories of cell and molecular biology, primarily in the 20th century, by exploring continuities and discontinuities between these fields and their precursors. Through discussion, attempts will be made to develop definitions of cell and molecular biology that are based upon their practices and explanatory strategies, and to determine to what extent these practices and strategies overlap. Finally, the relevance of these definitions to current developments in biology will be explored. The course is not designed to be comprehensive, but will provide an overall historical and conceptual framework.
Equivalent Course(s): HIST 35511, HIST 25511, HIPS 25902

CHSS 34921. Darwinism and Literature. 100 Units.
In this course we will explore the notion that literary fiction can contribute to the generation of new knowledge of the human mind, human behavior, and human societies. Some novelists in the late 19th and early 20th century provided fictional portrayals of human nature that were grounded into Darwinian theory. These novelists operated within the conceptual framework of the complementarity of science and literature advanced by Goethe and the other romantics. At a time when novels became highly introspective and psychological, these writers used their literary craftsmanship to explore and illustrate universal aspects of human nature. In this course we read the work of several novelists such as George Eliot, HG Wells, Joseph Conrad, Jack London, Yuvgeny Zamyatin, Leopold von Sacher-Masoch, Italo Svevo, and Elias Canetti, and discuss how these authors anticipated the discoveries made decades later by cognitive, social, and evolutionary psychology.
Equivalent Course(s): HIPS 24921, HIST 34921, KNOW 21418, CHDV 37861, CHDV 27861, KNOW 31418, HIST 24921

CHSS 35014. Introduction to Environmental History. 100 Units.
How have humans interacted with the environment over time? This course introduces students to the methods and topics of environmental history by way of classic and recent works in the field: Crosby, Cronon, Worster, Russell, and McNeill, etc. Major topics of investigation include preservationism, ecological imperialism, evolutionary history, forest conservation, organic and industrial agriculture, labor history, the commons and land reform, energy consumption, and climate change. Our scope covers the whole period from 1492 with case studies from European, American, and British imperial history.
Equivalent Course(s): HIPS 25014, ENST 25014, HIST 25014, CEGU 25014, HIST 35014

CHSS 35110. Philosophy of History: Narrative & Explanation. 100 Units.
This lecture-discussion course will focus on the nature of historical explanation and the role of narrative in providing an understanding of historical events. Among the figures considered are Gibbon, Kant, Humboldt, Ranke, Collingwood, Acton, Fraudel, Furet, Hempel, Danto. (B) (III)
Equivalent Course(s): KNOW 31401, HIST 25110, HIST 35110, PHIL 20506, HIPS 25110, PHIL 30506

CHSS 35202. We Other Victorians. 100 Units.
This course examines the construction of otherness, difference, and belonging in England during the long Nineteenth Century from a historical perspective. Each week students will study a different “other” by drawing on a variety of primary sources, including novels, autobiographies, government reports, legal documents, private correspondence, newspapers, and scientific publications. Special attention will be paid to how and why emerging social sciences such as anthropology, sociology, and psychology both contributed to and were themselves informed by, (1) broader discussions about cultural ethnicity, biological race, national identity, and modern society; as well as (2) changing conceptions of class, gender, race, religion, and illness. By working historically, students in this course will also develop a conceptual framework for studying otherness that transcends geographic and temporal boundaries. Students will learn about the socio-political, cultural, legal, scientific, and ideological construction of otherness in Victorian Britain while also developing a conceptual framework for studying otherness that transcends geographic and temporal boundaries. This course relies almost entirely on primary sources and is designed to help students develop the skills needed to complete an original research project independently.
Equivalent Course(s): KNOW 32201, HIST 31103, HIPS 22202

CHSS 35205. The Scientific Image. 100 Units.
This course explores the broad field of scientific image-making, focusing in particular on problems of formalism, abstraction, and realism. What makes a “good” scientific image? What kind of work do scientific images do? What philosophical, ideological, and political constraints underwrite attempts to render the complexity of events and entities in the world in stylized visual vocabularies? And how might we approach the work of aesthetics and style in image-making? We will examine these questions through a survey of several contemporary scholarly frameworks used for thinking about problems of representation in scientific practice, and will attend to such image-making practices as graphing, diagramming, modeling, doodling, illustrating, sculpting, and photographing, among other methods.
Equivalent Course(s): HIST 35205, HIPS 25505, HIST 25205

CHSS 35270. Infrastructure Histories. 100 Units.
Dams, sewers, container ships, water pipes, power lines, air conditioning, and garbage dumps: the critical infrastructures that enable modern life are so often invisible, except when they fail. This course explores the historical role of infrastructure as a set of planet-spanning systems of resource extraction and crucial conduits of social and political power. Looking at cases from apartheid South Africa and the Suez Canal to Mumbai and Chicago itself, we will consider the relationship of infrastructure with capitalism, settler colonialism, and postcolonial development. We will see how forms of citizenship and exclusion have been shaped and negotiated via wires, leaky pipes, and improvised repairs, and we will consider perhaps the biggest question of all: In this age of ecological crisis, do energy-guzzling infrastructural systems have a strange form of more-than-human agency all of their own?
Equivalent Course(s): ENST 25027, HIPS 25027, ARCH 25027, HIST 35027, HIST 25027

CHSS 35301. Global Science. 100 Units.
Is all science global, and if so, how did it get that way? Are some sciences more global than others? What has been at stake historically in describing scientific activity as variously local, transnational, international, or global, and how have these constructions influenced the historiography of the field? In this graduate colloquium, we will explore different approaches to writing and examining scientific knowledge production as a global phenomenon, as well as considering different historiographic attempts at grappling with science’s simultaneously local and global qualities, poly-vocal nature, and historical coproduction with global political and economic power.
Equivalent Course(s): HIST 35206, HIST 25206, HIPS 25316

CHSS 35302. Intro to History of Science. 100 Units.
This course provides an introduction to the interdisciplinary study of science, medicine, and technology. Beginning early in the twentieth century, sociologists, historians, philosophers, and anthropologists engaged in a consistent set of inquiries posing original, interesting, and consequential questions about the sciences. Their works drew on and responded to each other, and, taken together, their various approaches constituted a
field, which in the 1970s came to be called “science studies.” This course furnishes an initial guide to this field. Students will not only encounter some of its principal concepts, approaches, and findings, and see how they have developed over time and in context. They will also get a chance to apply science-studies perspectives themselves, by performing a fieldwork project. Among the topics we will examine include: the sociology of scientific knowledge and its applications; actor-network theories of science; constructivism and the history of science; and efforts to apply science-studies approaches beyond the sciences themselves.

Equivalent Course(s): CHSS 35415

CHSS 35416. History of Technology in America. 100 Units.

From the very earliest days of the United States, science and technology have played a fundamental role in how Americans think of themselves and their communities. This course examines the entwined histories of technology and American culture between two especially dramatic periods of techno-scientific transformation: from the industrial push following the end of the Civil War to the “revolution” in genomics and informatics that characterizes our present age. From railroads, telegraphs, and telephones which drew distant towns into tight-knit networks; to electrical marvels which engendered new forms of consumption and socialization; to the wonders and perils of atomic power, space flight, and genetic engineering, different groups of Americans have wrestled with questions of community, identity, ideology and politics through and with products of technological innovation. In the course of investigating these and other topics, students will examine a variety of primary and secondary sources; and will be expected to write weekly response papers and two short research papers.

Equivalent Course(s): HIST 35416, HIST 25416, HIPS 25416

CHSS 35421. Renaissance Book History: Censorship and the Print Revolution. 100 Units.

Collaborative research seminar on the history of censorship and information control, with a focus on the history of books and information technologies. The class will meet in Special Collections, and students will work with rare books and archival materials. Half the course will focus on censorship in early modern Europe, including the Inquisition, the spread of the printing press, and clandestine literature in the Renaissance and Enlightenment, with a special focus on the effects of censorship on classical literature, both newly rediscovered works like Lucretius and lost books of Plato, and authors like Pliny the Elder and Seneca who had been available in the Middle Ages but became newly controversial in the Renaissance. The other half of the course will look at modern and contemporary censorship issues, from wartime censorship, to the censorship of comic books, to digital-rights management, to free speech on our own campus.

Equivalent Course(s): HIST 35421, CLAS 35417, HIST 35421, CLCV 25417, RLST 22121, SIGN 26010, HIPS 25421, KNOW 31403, KNOW 21403, HREL 34309

CHSS 35425. Censorship, Info Control, & Revolutions in Info Technology from the Printing Press to the Internet. 100 Units.

The digital revolution is triggering a wave of new information control efforts and censorship attempts, ranging from monopolistic copyright laws to the “Great Firewall” of China. The print revolution after 1450 was a moment like our own, when the explosive dissemination of a new information technology triggered a wave of information control efforts. Many of today’s attempts at information control closely parallel early responses to the printing press, so the premodern case gives us centuries of data showing how diverse attempts to control
or censors information variously incentivized, discouraged, curated, silenced, commodified, or nurtured art, thought, and science. This unique course is part of a collaborative research project funded by the Neubauer Collegium for Culture and Society and is co-organized with digital information expert Cory Doctorow. The course will bring pairs of experts working on the print and digital revolutions to campus to discuss parallels between their research with the class. Classes will be open to the public, filmed, and shared on the Internet to create an international public conversation. This is also a Department of History "Making History" course: rather than writing traditional papers, students will create web resources and publications (print and digital) to contribute to the ongoing collaborative research project.

Equivalent Course(s): HIST 35425, KNOW 25425, HIPS 25425, HIST 25425, BPRO 25425, MAAD 15425, HREL 35425, SIGN 26035, KNOW 40103

CHSS 35506. Science and Aesthetics in the Eighteenth to the Twenty-First Centuries. 100 Units.
One can distinguish four ways in which science and aesthetics are related during the last three centuries. First, science has been the subject of artistic effort in painting and photography and in poetry and novels (e.g., in Goethe’s poetry or in H. G. Wells’s Island of Doctor Moreau). Second, science has been used to explain aesthetic effects (e.g., Helmholtz’s work on the way painters achieve visual effects or musicians achieve tonal effects). Third, aesthetic means have been used to convey scientific conceptions (e.g., through illustrations in scientific volumes or through aesthetically affective and effective writing). Finally philosophers have stepped back to consider the relationship between scientific knowing and aesthetic comprehension (e.g., Kant and Bas van Fraassen). In this course, we will consider these four modes of relationship. The first part of the quarter will be devoted to Kant, reading carefully his third critique; then we will turn to Goethe and Helmholtz, both feeling the impact of Kant, and to Wells, a student of T. H. Huxley. We then consider more contemporary modes expressive of the relationship, especially the role of illustrations in science and the work of contemporary philosophers like Fraassen.

Equivalent Course(s): HIPS 25506, PHIL 24301, HIST 25506, SIGN 26003, KNOW 31402, KNOW 21402, PHIL 34301, HIST 35506

CHSS 35525. Environmental Histories of the Global South. 100 Units.
Drawing on cases from Africa, Latin America, and especially Asia, this course explores key themes in the modern environmental history of the world beyond the rich industrialized North. Our investigations will focus on the ecological impacts of colonialism, war, and development, and how environmental management has helped to construct modern states and capitalist practices in turn. Ranging from the malarial plantations of the Caribbean to the forests of southeast Asia, we will analyze not-so-natural disasters like floods and chemical spills as well as the slow violence of deforestation and droughts. Combining primary sources with classic scholarship, we will encounter pioneering green activists like the original "tree huggers" of the Himalayas and environmental advocates for brutal population control. The course will conclude by examining the emergence of a newly assertive Global South in international climate negotiations, and its implications for the environmental history of our planet at large. The course is open to all, but may be of particular interest to students who have taken "Introduction to Environmental History."

Equivalent Course(s): HIST 25025, ENST 25025, CEGU 25025, HIST 35024, HIPS 25525, SALC 25025, SALC 35025

CHSS 35605. Life and A Life. 100 Units.
This course is about the aims of human life. We address the question through two contrasting conceptions of life: 1) life in the sense of an ongoing activity—and its associated values of pleasure, enlightenment, and happiness, and 2) life in the sense of a biographical story—and its associated values of achievement, glory, meaning, and purpose. We will attempt to understand how these two conceptions of life are compatible, and if one or the other is prior. Readings include: Aristotle, Nietzsche, Kierkegaard, William James, Bernard Williams, Iris Murdoch, and Jonathan Lear. (A)

Equivalent Course(s): PHIL 25605, PHIL 35605, HIPS 25605

CHSS 35994. Epistemic Virtues. 100 Units.
Epistemic virtues are to the pursuit of scientific and scholarly truth what moral virtues are to the pursuit of the ethically good: personal qualities more likely (though never certain) to advance these goals and therefore ones instilled and praised by the communities dedicated to such pursuits. In both the contemporary humanities and the sciences, epistemic virtues include rigor, precision, objectivity, and productivity; in past epochs, certainty ranked high. As in the case of moral virtues, various epistemic virtues can not only coexist with or even support but also come into conflict with one another, raising the question: how to adjudicate their competing claims? Using historical and contemporary case studies, this seminar will explore a range of epistemic virtues in both the humanities and sciences. The aim is to reflect on commonalities and differences across the disciplines and on the ways in which ethics and epistemology converge. (Co-teaching with Lorraine Daston.)

Equivalent Course(s): HIPS 25994, SCTH 35994, PHIL 25994, PHIL 35994, CLCV 23722, CLAS 33722, HIST 39505

CHSS 35996. Natural and Unnatural Disasters. 100 Units.
Earthquakes, volcanoes, droughts, floods, plagues—these are all examples of disasters that have challenged both their victims as well as scientists and philosophers to make sense of what seems like the most violent and senseless destruction and suffering. In an era that now questions whether such disasters are truly natural or manmade, the questions of blame and responsibility have become urgent. This course will examine these questions historically, looking at how disasters have been understood by theologians, philosophers, scientists, lawyers, and insurance companies.
Equivalent Course(s): SCTR 35996, HIPS 25996, SCTR 25996

CHSS 36043. The Aesthetics of Artificial Intelligence. 100 Units.
With the emergence of generative AI tools such as ChatGPT, DALL-E, and Midjourney, the production of computer-generated content has become accessible to a wide range of users and use cases. Knowledge institutions are particularly challenged to find adequate responses to changing notions of authorship as the mainstreaming of ‘artificial’ texts, audio-visual artifacts, and code is transforming our paradigms of communication in real-time. This course offers a survey of scholarship from the nascent field of critical AI studies to investigate the impact of AI, machine learning, and big data on knowledge production, representation, and consumption. In addition to theoretical discussions, we will conduct research-creation experiments aimed at documenting and evaluating emerging methods of AI-augmented content creation across text, image, and sound. Prospective students should demonstrate a substantial interest in media art and design and its connections to digital humanities, critical theory, and pedagogy. Experience with artistic and/or engineering practice is a plus. Please submit a 300 word max statement of interest to uh@uchicago.edu by 12/22 in order to be considered for enrollment.
Equivalent Course(s): KNOW 36043, MACS 36043, ANTH 26043, ANTH 36043, HIPS 26043, CMST 26043, KNOW 26043, MAAD 12043, CMST 36043

CHSS 36054. Formation of Knowledge MAPSS Core: Ways of Knowing. 100 Units.
This seminar introduces students to the conditions and processes of knowledge formation that shape our understanding of truth, our theories of social life, and our projections of possible futures. It examines how claims to knowledge emerge out of extraordinary, historical, and political contexts, as well as local cultural factors, both explicit and unspoken: how do institutions, technologies, and other normative structures produce, stabilize, or disrupt knowledge? How do scientists and artists examine and represent the world differently? What makes expertise and why do we trust certain ways of knowing over others? Building upon methods and perspectives in the social sciences and humanistic social sciences, this seminar introduces problems, concepts, and analytical tools that will enable students to work from diverse disciplinary backgrounds to examine how we know what we know. "Ways of Knowing" is a required seminar for all students wishing to undertake the Formation of Knowledge MAPSS track https://sifk.uchicago.edu/mapss/. It also counts towards a required MAPSS Methods seminar.
Equivalent Course(s): KNOW 36054, MACS 26054, HIST 35103

CHSS 36059. Media, Environment, and Risk. 100 Units.
In 1991, Ulrich Beck wrote that “society is made into a laboratory.” Following the Chernobyl disaster, Beck articulated how modern technology and its potential side-effects—such as radiation or chemical poisoning—had created the novel epistemological category of environmental risk defined by threats that escape human perception and transcend borders. Institutions monitoring ecological conditions gained responsibility for communicating public health. Political conflicts emerged between formations of expert and lay environmental knowledge. The technological application of modern science, and its associated environmental risks, pushed research beyond the laboratory and into the governmental fabric of social order: nuclear reactors had to be constructed and chemicals distributed to populations before their properties and safety could be understood. This seminar reads the debates on risk in environmental sociology alongside the emergence of risk criticism in media studies to interrogate the probabilistic thinking inherent to the communication of ecological threat. Two common traits characteristic of recent environmental catastrophes ranging from Bhopal, Fukushima Daiishi, Deepwater Horizon, Exxon Valdez, Hurricane Katrina, and the varied crises of global climate change, are that each disaster involves the failure or side-effect of an implemented technological project and that the corresponding risks—whether imperceptible or probable—are necessarily communicated to publics by media. 
Equivalent Course(s): HIPS 26059, KNOW 36059, SOCI 30329, CMST 42802, MAAD 26059

CHSS 36065. Classification as World-Making. 100 Units.
To classify,” write Geoffrey Bowker and Susan Star, “is human.” There can be no doubt that classification sits at the heart of almost any form of knowledge production arguably even thought itself. But what diversity hides under such altruism? This course will explore a set of exemplary fields in order to track genealogies and discontinuities in classificatory. We will begin with two philosophers, Aristotle and Kant, who stand as respective avatars of ancient and modern categorical thought. We will then proceed to sites where classification has flourished: the biological sciences which sought to capture the diversity of the living world; the social sciences—notably anthropology—which challenged the universality of Western cultural categories; and statistics or data science, which seek to understand numerical aggregates as categories. We will conclude by reflecting on the present explosion of digital techniques of classification, from social media algorithms to artificial intelligence, which structure more and more of our lives, often without human oversight. In this sense, classification is perhaps nonhuman as well. Moving between history, epistemology, and practice, this course will furnish students with a rich set of classificatory ideas that they can bring to their own research and disciplinary communities. Above all, it will ask students to account for both the construction and effects of categories, which are too often taken to be a neutral substrate of knowledge or conce...
efforts that in turn forever changed the way we understand, raise, and educate children. This seminar will revisit the lives of children who had served as subjects of observation and experiment from the 1880s to the 1950s, and whose childhood experiences (their emotions, thoughts, and games; their family lives and institutional realities) had shaped the central dogmas of developmental psychology, as well as our ideas about normality. The course takes a biographical approach to the history of science, but rather than focus on the careers of scientists and doctors, delves into the stories of their objects of study, from the Bostonian first graders who answered G. Stanley Hall’s pioneering survey to the 44 “juvenile thieves” who had informed John Bowlby’s influential attachment theory.

Equivalent Course(s): CHDV 36069, KNOW 36069, EDSO 36069, HLTH 26069

CHSS 36071. Knowing Animals. 100 Units.
What is an animal, and are we them? In “Knowing Animals,” we will approach this deceptively simple question from multiple angles, exploring the diverse ways that humans come to know and differentiate themselves from other animals and the implications of that labor. How can we understand and write about the lived experience of a bat, an octopus, or a hawk? Who decides which species are essential to experimental science, and which are simply edible? Why do we buy canine pharmaceuticals or construct tiger preserves in Oklahoma? The course will explore how hunting, eating, petkeeping, labor, experimentation, and cohabitation with animals contribute to the formation of knowledge. We will draw on scholarship in history, cultural anthropology, philosophy, and critical theory, as well as novels and films in order to do so. The course is meant to serve in part as an introduction to the topics and methods of animal history and animal studies, so we will read foundational texts as well as recent scholarship on the intersections of animality, capital, disability, gender, and race. Students will leave with core competencies in the field as well as hopefully a deeper sense of what it means to be human.

Equivalent Course(s): KNOW 36071, HIST 35015

CHSS 36077. The Crisis of Expertise. 100 Units.
In recent years, there has been intensive talk about an unfolding “crisis of expertise” in liberal-democratic societies. Along with attacks on the credibility of scientific knowledge, technical experts are seen as detached elites whose impartiality is questionable and whose motivations can no longer be trusted. But who are experts? Whom do they represent and what are the sources of their authority? What kinds of institutions employ expertise, and how can expertise be held to democratic controls? This course examines the historical roots of our expert culture and takes a critical look at the assumptions underlying the use of expertise in policymaking. Drawing on a series of case studies - management of nuclear risk, vaccine resistance, debates over the nature of mental illness, environmental activism - we will explore the basis for claims of expertise, the reasons for expert controversies, the relations between laypeople and experts, as well as the processes that led to the erosion of public trust in professional advice.

Equivalent Course(s): SOCI 30343, HLTH 26077, DEMS 36077, KNOW 36077, HIPS 26077, HIST 29542

CHSS 36078. Normal People. 100 Units.
Worrying about what’s normal and what’s not is an endemic feature of both our popular and scientific cultures. Is my intelligence above average? What about my height? Should I be feeling this way? Is there a pill for that? People seem to have always been concerned with fitting in, but the way of describing the general run of practices and conditions as “normal” is a rather recent phenomenon; testament to the vast influence of the modern human sciences on how we understand ourselves and others. This seminar will offer a broad historical overview of the ways that group behaviors and individual traits - bodily, moral, intellectual - were methodically described and measured in the past 200 years. We will become acquainted with the work of sociologists and anthropologists, psychiatrists and psychologists, polling experts and child development specialists, and ask about the kinds of people their efforts brought into being, from sexual perverts to the chronically depressed. The course will focus on the scientific theories and techniques used to distinguish the normal from the pathological, together with the new social institutions that translated this knowledge into forms of control. We will read Émile Durkheim on suicide rates and Cesare Lombroso on born criminals; learn about IQ tests and developmental milestones; and consider whether, with the advent of personalized medicine and self-data, we have indeed reached the “end of average.”

Equivalent Course(s): CHDV 36078, SOCI 40255, HLTH 26078, IRHU 20009, KNOW 36078, HLTH 26078

CHSS 36080. Technologies of the Body. 100 Units.
From models and measures to imaging technologies and genomic sequencing, technologies have profoundly shaped how we know and understand human bodies, health, and disease. Drawing on foundational and contemporary science and technology studies scholarship, this class will interrogate technologies of the body: how they are made, the ways in which they have changed understandings of the human condition, their impact on individual and collective identities, and the interests and values built into their very design. Course readings will examine how technologies render bodies knowable and also construct them in particular ways. We will also focus on how technologies incorporate, and reinforce, ideas about human difference. Students will conduct an independent, quarter-long research project analyzing a biomedical technology of their choice. By the end of this course, students will be able to identify and explain the social, political and economic factors that shape the design and production of biomedical technologies, as well as the impact of these technologies on biomedicine and the social world more broadly. This course provides students with an opportunity to conduct a quarter-long research project, using a biomedical technology as a case study. Students will be introduced to foundational and cutting-edge scholarship in science and technology studies, and will use this scholarship to conduct their independent research.
CHSS 36088. The Scientist in the Nineteenth-Century Imagination. 100 Units.
The nineteenth century saw both the professionalization of science and the specialization of its practitioners. In this age of "human empire" produced by industrialization, new technologies offered humanity unprecedented dominion over the natural world, and the "scientist," a term coined in 1834, marked the advent of the idea of a vocation dedicated to that mastery. Moreover, by the end of the century, the natural philosophers and polymaths of earlier ages had given way to chemists, physicists, biologists, and statisticians, whose scope of study was necessarily both deeper and narrower. These developments produced a new social and political positioning for the scientist - an expert, an authority, a wielder of power. This class explores how nineteenth-century fiction writers, from Mary Shelley and Edgar Allan Poe to Jules Verne and Arthur Conan Doyle, engaged with these emerging and transforming conceptualizations of the scientist figure. We will pair our literary explorations with non-fiction readings texts by thinkers and scientists such as Humphry Davy, Karl Pearson, Claude Bernard, William Whewell, and Max Weber ("Science as Vocation") about what the scientist should be and science should do. Additionally, we'll consider how this literary genealogy influences both our fictional portrayal of science to this day as well as our perceptions of it - from our contemporary distrust of expertise to our fear of the scientist playing god.
Equivalent Course(s): CMLT 36088, KNOW 36088

CHSS 36311. Aspirations of Justice. 100 Units.
This class thinks through questions of what justice means, what justice promises, what justice betrays, and what possibilities for politics are opened by aspirations of justice at moments of radical rupture. It does so through a focus on critical conceptual terms that also become the frameworks for praxis and institutionalization after war/violence/trauma/revolution/colonialism/slavery/casteism: terms such as transition, transformation, restoration, reconstruction, and repair. The readings will be comparative but grounded out of South Africa's experience of transition from apartheid, a process that remains frictioned, fractured and far from finished. At the core of the class are two concerns. First: how does one think about non-retributive forms of justice, and what aporias of forgiveness lie at their core? Second, how do these imaginaries and forms of justice get constituted and institutionalized, out of different histories of foundational violence, different transitional processes, at different moments in time? How, in the process, do histories themselves get rewritten through a process of rewriting wrongs?
Equivalent Course(s): RDIN 22311, CCC 36311, CRES 22311, ANTH 36311, HIPS 26311, AASR 36311

CHSS 37011. Histories of Women in Science. 100 Units.
In the mid-1980s, only two female students drew women when asked what a scientist looked like and none of the male students in the study did. Only 8% of STEM workers in 1970 were women; in 2019 that number was still only 27%. This would seem to suggest that the history of women in science is a recent one. Yet historians of science have foregrounded women's involvement in fields ranging from early modern medicine to twentieth century astrophysics. This class introduces students to these histories, investigates how and why science came to be a gendered as male, and asks to what extent gendered values continue to inform modern conceptions of scientific achievement or value. In so doing, this course also introduces students to feminist science studies and challenges students to reflect upon their own (gendered) experiences of science. Students are strongly encouraged to develop final research projects that draw upon their own interests, scientific expertise, and linguistic competencies. No prior experience with history is required for this course, although an enthusiasm for history is advised.
Equivalent Course(s): HIST 27806, GNSE 37011, PHSC 27010, HIPS 27011, GNSE 23162, KNOW 37011, ASTR 23700

CHSS 37015. Graphic Medicine: Comic Creation as Knowledge Formation. 100 Units.
What does the medium of comics contribute to our knowledge and understanding of illness, disability, caregiving, and disease? How can making comics help us form individual and community knowledge about our bodies and health? This is a course designed to introduce students to the basic concepts and practices of the field of graphic medicine. To do this, we will closely engage with the elements and process of making comics as applied to the goals, principles, and applications of graphic medicine in particular, but also in relation to the health humanities. Broadly defined as the "intersection between the medium of comics and the discourse of healthcare," graphic medicine allows for unique explorations of health, disease, and illness through the use of sequential images and textual elements within a narrative structure. Students will learn about conceptual and practical aspects of the field. Through critical analysis and discussion of key works, they will also be exposed to a variety of styles, genres, and applications that capture the breadth and diversity of graphic medicine. An important component of the class will be exercises through which students will create their own graphic medicine works as a way to explore knowledge formation about health, illness, and one's body through comics-making. Taught by a nurse cartoonist (and a founding figure in the field) and a physician.
Equivalent Course(s): KNOW 37015, HLTH 27015, KNOW 27015, HIPS 27015, ENGL 27015

CHSS 37400. Colloquium: Environmental History. 100 Units.
This graduate colloquium provides an advanced introduction to the vibrant field of environmental history. We will trace the evolution of this rich historiography, from first-generation classics-often focused on the American West-through to the geographical and thematic diversification of recent years. The course will give a flavor of this diversity, touching too upon influential works in emerging subfields like animal history, climate history, enviro-tech, and evolutionary history. Throughout, we will study how historians have addressed new analytical
and aesthetic challenges: negotiating the insights of the natural sciences, incorporating nonhuman agency, and writing history at the vast scales of deep time and the planetary. The course is ideal for PhD students preparing a general examination field and/or designing a research paper, but is open to MA students as well.
Equivalent Course(s): HIST 57300

CHSS 37402. History and Philosophy of Biology. 100 Units.
This lecture-discussion course will consider the main figures in the history of biology, from the Hippocrates and Aristotle to Darwin and Mendel. The philosophic issues will be the kinds of explanations appropriate to biology versus the other physical sciences, the status of teleological considerations, and the moral consequences for human beings.
Equivalent Course(s): PHIL 33405, PHIL 23405, HIPS 25104, HIST 25104, KNOW 37402, HIST 35104

CHSS 37502. Energy and Energy Policy. 100 Units.
This course shows how scientific constraints affect economic and other policy decisions regarding energy, what energy-based issues confront our society, how we may address them through both policy and scientific study, and how the policy and scientific aspects can and should interact. We address specific technologies, both those now in use and those under development, and the policy questions associated with each, as well as with more overarching aspects of energy policy that may affect several, perhaps many, technologies.
Equivalent Course(s): PPHA 39201, ENST 29000, FSMS 39000, BPRO 29000, PBPL 29000, ECON 26800

CHSS 37600. Philosophical Problems in the Biological Sciences. 100 Units.
TBD
Equivalent Course(s): HIPS 22700, PHIL 32700, EVOL 32700

CHSS 37860. History of Evolutionary Behavioral Sciences. 100 Units.
This course will consist in lectures and discussion sessions about the historical and conceptual foundations of evolutionary behavioral sciences (evolutionary anthropology, evolutionary psychology, ethology, comparative behavioral biology), covering the period from the publication of Charles Darwin’s The Origin of Species up to the present day. Topics will include new theoretical developments, controversies, interdisciplinary expansions, and the relationships between evolutionary behavioral sciences and other disciplines in the sciences and the humanities.
Equivalent Course(s): HIPS 27860, CHDV 37860, CHDV 27860, HLTH 27860, KNOW 27860

CHSS 37900. Biological and Cultural Evolution. 100 Units.
This course draws on readings in and case studies of language evolution, biological evolution, cognitive development and scaffolding, processes of socialization and formation of groups and institutions, and the history and philosophy of science and technology. We seek primarily to elaborate theory to understand and model processes of cultural evolution, while exploring analogies, differences, and relations to biological evolution. This has been a highly contentious area, and we examine why. We seek to evaluate what such a theory could reasonably cover and what it cannot.
Equivalent Course(s): LING 39286, PHIL 32500, NCDV 27400, PHIL 22500, ANTH 38615, CHDV 23930, CHDV 33930, ANTH 28615, HIPS 23900, LING 11100, BPRO 23900

CHSS 37901. Kant’s Critique of Pure Reason. 100 Units.
This will be a careful reading of what is widely regarded as the greatest work of modern philosophy, Immanuel Kant’s Critique of Pure Reason. Our principal aims will be to understand the problems Kant seeks to address and the significance of his famous doctrine of “transcendental idealism”. Topics will include: the role of mind in the constitution of experience; the nature of space and time; the relation between self-knowledge and knowledge of objects; how causal claims can be justified by experience; whether free will is possible; the relation between appearance and reality; the possibility of metaphysics. (B) (IV)
Equivalent Course(s): PHIL 37500, HIPS 25001, PHIL 27500, FNDL 27800

CHSS 38305. Catastrophic Thinking: Extinction in Culture and Science. 100 Units.
This course will examine the history of extinction through a consideration not only of relevant scientific literature, but also through the diverse forms of cultural production through which the scientific ideas have refracted: fiction and science fiction, film, political discourse, journalism and popular science, philosophy, religion, and more. From the apocalyptic visions of religious movements and cults, to protest movements of the 60s, 70s, and 80s, to fascination with zombies and world-ending plagues and catastrophes, we will consider the many ways in which “catastrophic thinking” about extinction has come to permeate the modern condition in science and society.
Equivalent Course(s): HIPS 28305, HIST 25420, HIST 35420

CHSS 38306. Data History: Information Overload from the Enlightenment to Google. 100 Units.
The current era of “Big Data” is often described as a new paradigm in science: increasingly, in fields ranging from molecular genetics to particle physics to internet search analytics, knowledge is produced by processing massive electronic databases with digital algorithms that tell us who we are, what the universe is made of, and why we think and act the way we do. At the same time, the tools, techniques, and social implications of modern data culture have a deep history that stretches back well before the advent of digital computers. Understanding the world by collecting and analyzing large quantities of information has been a goal in the natural and social sciences for centuries, and this history has shaped our current fascination with data in important and surprising ways. This course will examine the long-term history of data in critical historical context. We will examine how
data has been collected, managed, and analyzed in the sciences over the past few centuries - the emergence of various technologies and conventions for information processing - as well as why it has been such a central concern in so many disciplines - what was understood to be the goal of reducing the world to data. We will also consider what social and political consequences the history of data reveals, and we will discuss the ethical and epistemological concerns that have emerged as science has become increasingly oriented towards collecting and manipulating large quantities of data.

Equivalent Course(s): HIST 29523, HIPS 28306, HIST 39523, MAAD 18306

CHSS 38307. Global Environmental Humanities. 100 Units.

This course is an introduction to the interdisciplinary field of environmental humanities, which calls on us to study the global environment, and the threats posed by globalization and climate change, using the tools of history, cultural studies, philosophy, and literature. Reading texts from these and other disciplines, we will attend to the ways that "environment" registers in political, aesthetic, and social life across the globe. Sample authors: Fernand Braudel, William Cronon, Dipesh Chakrabarty, Amitav Ghosh, Ursula Heise, Joseph Masco, Jed Purdy, Anna Tsing.

Equivalent Course(s): KNOW 28307, HIPS 28307, ENST 28307, KNOW 38307, HIST 25422, CEGU 28307

CHSS 38308. Science and Selfhood in Modern Europe. 100 Units.

This course explores the role of the sciences in changing ideas of selfhood in 19th- and 20th-century Europe. How did the proliferation of new forms of knowledge about humans (biological, psychiatric, evolutionary, sociological, anthropological) transform peoples’ understandings of themselves as biological beings, as bearers of consciousness, as subjects and citizens? This course pairs primary sources with secondary texts from European history, history of science, and history of the human sciences.

Equivalent Course(s): HIST 25423, HIPS 28308

CHSS 38400. Darwin’s "On the Origin of Species" and "The Descent of Man" 100 Units.

This lecture-discussion course will focus on a close reading of Darwin’s two classic texts. An initial class or two will explore the state of biology prior to Darwin’s Beagle voyage, and then consider the development of his theories before 1859. Then we will turn to his two books. Among the topics of central concern will be the logical, epistemological, and rhetorical status of Darwin’s several theories, especially his evolutionary ethics; the religious foundations of his ideas and the religious reaction to them; and the social-political consequences of his accomplishment. The year 2019 was the 210th anniversary of Darwin’s birth and the 160th anniversary of the publication of On the Origin of Species. (B) (IV)

Equivalent Course(s): HIPS 24901, HIST 34905, PHIL 33015, FNDL 24905, PHIL 23015, HIST 24905

CHSS 39000. Kepler: Astronomy. 100 Units.

The course will focus on Johannes Kepler, whose discovery of the three major laws of planetary motion toppled the Copernican model of the universe and established him as a key figure in the 17th century scientific revolution.

Equivalent Course(s): ASTR 38900, HIPS 28901

CHSS 39001. Counterhistories of Mathematics and Astronomy. 100 Units.

Mathematics and astronomy are often taught as packaged universal truths, independent of time and context. Their history is assumed to be one of revelations and discoveries, beginning with the Greeks and reaching final maturity in modern Europe. This narrative has been roundly critiqued for decades, but the work of rewriting these histories has only just begun. This course is designed to familiarize students with a growing literature on the history of mathematics and astronomy in regions which now make up the global south. It is structured as a loosely chronological patchwork of counterexamples to colonial histories of mathematics and astronomy. Thematic questions include: How were mathematical and astronomical knowledge conjoined? How were they embedded in political contexts, cultural practices, and forms of labor? How did European scientific modernity compose itself out of the knowledges of others? Where necessary, we will engage with older historiographies of mathematics and astronomy, but for the most part we will move beyond them. No mathematics more advanced than high school geometry and algebra will be assumed. However, those with more mathematical preparation may find the course especially useful.

Equivalent Course(s): SALC 39000, HIST 35305, HIPS 27010, ASTR 39000, ASTR 29000, KNOW 39000

CHSS 39405. Advanced Logic. 100 Units.

This class will explore dependent type theory, with a focus on the identity relation. Different ways of thinking of the identity relation will be examined, culminating in a presentation of the Univalence axiom and a discussion of its role as a potential foundation for mathematics. (B) (II)

Equivalent Course(s): HIPS 20905, PHIL 29405, PHIL 39405

CHSS 39516. History of Skepticism. 100 Units.

Before we ask what is true or false, we must ask how we can know what is true or false. This course examines the vital role of doubt and philosophical skepticism have played in the Western intellectual tradition, from pre-Socratic Greece through the Enlightenment, with a focus on how Criteria of Truth-what kinds of arguments are considered legitimate sources of certainty-have changed over time. The course will examine dialog between skeptical and dogmatic thinkers, and how many of the most fertile systems in the history of philosophy have been hybrid systems which divided the world into things which can be known, and things which cannot. The course will touch on the history of atheism, heresy and free thought, on fideism and skeptical religion, and will
examine how the Scientific Method is itself a form of philosophical skepticism. Primary source readings will include Plato, Sextus Empiricus, Lucretius, Ockham, Pierre Bayle, Montaigne, Descartes, Francis Bacon, Hobbes, Voltaire, Diderot, and others.

Equivalent Course(s): KNOW 21406, HIPS 29516, HREL 39516, CLCV 28517, CLAS 38517, KNOW 31406, RLST 22123, SIGN 26011, HIST 39516

CHSS 39620. Biology, Technology, and Politics in 20th Century Europe. 100 Units.

This course examines the cultural, social, and scientific practices that conceptually and materially reshaped biological life in late-nineteenth- and early-twentieth-century Europe. Topics include labor, psychiatry and psychoanalysis, eugenics, gender and sexuality, colonialism and racism, genetics, cybernetics, bioethics and reproduction, and human rights. In addition to providing an overview of these important themes in modern history, this course will expose students to several methodological approaches to history, including the history of science, cultural history, and intellectual history. We ask questions such as: How did the category of the human come to be a biological one? How does scientific knowledge about the brain inform beliefs about the mind and emotions? What political or moral authority does biology carry, and how have the scientific discoveries of the last century enhanced or weakened that authority? How does social context shape science, and, just as importantly, how does science remake the social? Authors include: Sarah Franklin, Thomas Laqueur, Anson Rabinbach, Robert Proctor, Georges Makari, Jürgen Habermas, Katja Guenther, Bruno Latour, Georges Canguilhem, Michel Foucault, Robert J. Richards, Paul Rabinow.

Equivalent Course(s): HIST 25417, HIPS 29620

CHSS 39625. Philosophies of Life Before and After DNA. 100 Units.

TBD

CHSS 40201. Religion and Reason. 100 Units.

The quarrel between reason and faith has a long history. The birth of Christianity was in the crucible of rationality. The ancient Greeks privileged this human capacity above all others, finding in reason the quality wherein man was closest to the gods, while the early Christians found this viewpoint antithetical to religious humility. As religion and its place in society have evolved throughout history, so have the standing of, and philosophical justification for, non-belief on rational grounds. This course will examine the intellectual and cultural history of arguments against religion in Western thought from antiquity to the present. Along the way, of course, we will also examine the assumptions bound up in the binary terms 'religion' and 'reason.'

Equivalent Course(s): KNOW 40201, DVPR 46616, CLAS 46616, HIST 66006, PHIL 43011

CHSS 40203. Biopolitics & Posthumanism. 100 Units.

Much has been written about the possibility (or impossibility) of creating an integrated political schema that incorporates living status, not species boundary, as the salient distinction between person and thing. In this course, we will explore how biopolitical and posthumanistic scholars like Michel Foucault, Hannah Arendt, Giorgio Agamben, Jane Bennett, Cary Wolfe, and Donna Haraway have acknowledged (and advocated transcending) the anthropocentric ümwelt, to borrow Jakob von Uexküll's influential term. In parallel with our theoretical readings, we will explore how actual legal systems have incorporated the nonhuman, with a particular focus on Anglo-American and transnational law. Our goal is to develop our own sense of an applied biopolitics-whether to our own research, to future legislation and jurisprudence, or both.

Equivalent Course(s): CMLT 40203, KNOW 40203, ENGL 40203

CHSS 40205. Ecological Thinking. 100 Units.

What is the environment, anyway? Is it a collection of resources? An entity in need of protection? An autonomous state of being? In this course, we will engage with writers and thinkers who have grappled with what it means to think ecologically. We will examine how environmental concerns have reached across borders to shape law, culture, and theories of knowledge on a global scale. Course themes will include environmental justice, the energy humanities, postcolonial environmentalisms, ecocriticism, ecofeminism, queer ecologies, and critical life studies. Readings will include works by Rachel Carson, William Cronon, Lawrence Buell, Helena Maria Viramontes, Christopher Stone, Rob Nixon, Tamara Giles-Vernick, Timothy Morton, and others.

Equivalent Course(s): KNOW 40205

CHSS 40206. Assaulting the Paradigm: Franz Boas and His Contemporaries. 100 Units.

How do ideas succeed? What challenges do those who voice new ideas face as they try to gain adherents, and how do they rise to influence against the odds? This course examines how the unexpected, the unconventional, and the radically original can dethrone accepted truths. We will investigate this question through a case study of the anthropologist Franz Boas and his contemporaries, who assaulted the paradigm of race at the turn of the twentieth century. In addition to reading Boas, we will study the works of John Dewey, W. E. B. Du Bois, Sigmund Freud, Zora Neale Hurston, Claude Lévi-Strauss, Margaret Mead, and Thorstein Veblen. By tracing the mutual influence between Boas and thinkers in fields from psychology to philosophy, we can examine how knowledge is contested and propagated—including the challenges those who frame ideas face as they break away from the pack, the role of social networks in the success of concepts that go “against the grain” of conventional wisdom, and the special agency of multidisciplinary collaboration in the periods of ferment produced when authority is tested and new ideas are demanded.

Equivalent Course(s): KNOW 40206, ANTH 44810
CHSS 40207. Human Rights and Humanitarianism in the Modern World. 100 Units.
The related concepts of human rights and humanitarianism form the basis of contemporary ethical and political
thought. Acting in the name of "humanity" is seen as unequivocally noble, and very few of us would ever claim
to be anti-humanitarian or anti-human rights. Yet the moral consensus surrounding these terms obscures a
contested and often disturbing history. Rather than uncritically accepting a triumphalist story of the progressive
victory of human rights and humanitarianism, this course will explore how these concepts were constructed
over time, paying special attention to how they were used in practice, what kind of rhetorical work they
accomplished, and whose interests they served. The course will consider the origins of modern concepts of
humanity, rights, citizenship, and social responsibility during the enlightenment and trace how they developed
over the course of the 19th and 20th centuries. We will study the role of human rights and humanitarianism in
the transformative events and processes of modern history, including the rise of nation-states, the trans-Atlantic
slave trade and its abolition, imperial expansion and decolonization, the world wars, and twentieth-century
genocides. Students will leave the course with an understanding of how human rights and humanitarianism can
be applied to their own research interests.
Equivalent Course(s): HMRT 40207, KNOW 40207

CHSS 40208. Man and/as Machine. 100 Units.
Recently, Amazon employees fighting for better working conditions united under the slogan "We are not robots!"
Recalling Karl Capek's R.U.R., which coined the word robot (from the Czech word for slave), the slogan suggests
the importance of the machine as an object and a concept in relation to which human identity has been - and
continues to be - defined. Throughout the history of human thought, the machine has existed as both something
that we are like (for example, Descartes comparing the brain to a machine) but also as an opposite to humanity
(as in the aforementioned slogan). This course will trace this tension between the machine as an 'Other' and as a
metaphor for our human self from the early modern period to the present. Beginning with theoretical and
philosophical writing on the importance of oppositions and binaries to human identity and language, it will trace
the history of the idea of the machine as it relates to the human in texts by Rene Descartes, La Mettrie, Emile
Zola, Karl Capek, Alan Turing, and Donna Haraway, among others. In addition to confronting the complexity
and ambiguity of a concept that ubiquitously shapes our lives today, students in this course will also wrestle with
broader humanistic questions regarding the nature of the Self, the boundaries between self and other, and the
relationship between human identity and technology.
Equivalent Course(s): KNOW 40208

This course critically examines concepts of "nature" and "artifice" in the formation of scientific knowledge, from
the Babylonians to the Romantics, and the ways that this history has been written and problematized by both
canonical and less canonical works in the history of science from the twentieth century to the present. Our course
is guided by three overarching questions, approached with historical texts and historiography, that correspond to
Equivalent Course(s): HIST 34920, KNOW 40304, CRES 40304, GNSE 40304, HIPS 40304

CHSS 40305. The Archive of Early English Literature: Manuscripts, Books, and Canon. 100 Units.
This course will introduce students to early English literature through research in early English manuscripts and book history.
Throughout the course we will reflect on archival research as a critical practice: how do the material histories of early texts invite us to rethink the fundamental categories that organize literary history, like authorship or
canonicity? The course will be both a practicum (teaching the basics of paleography, codicology, and textual
editing) and an ongoing conversation about the archives of literary history, as sites of interpretation, memory,
and erasure. We will meet in the Special Collections Research Center, and use the collections of the University
of Chicago. We will first focus on the archives of Chicago's Chaucer Research Project and its principals, John
Matthews Manly and Edith Rickert, who tried to establish an authoritative text of the Canterbury Tales in the
early twentieth century. The second half of the course will focus on print culture and reading practice, with a
focus on Chicago's collection of early modern commonplace books. Students will propose and pursue a research
project in the U of C or Newberry Library collections, on a topic of their choosing. Students will produce a piece
of scholarship that reflects both careful research in those collections and thoughtfulness about the place of that
research in critical practice.
Equivalent Course(s): ENGL 40305, KNOW 40305

CHSS 40306. Race, Land, and Empire: History, Intersectionality, and the Meanings of America. 100 Units.
This seminar examines the making and meaning of the United States at the intersections of race, land, and empires. It considers a set of profound historical transformations that shape American and global life today:
the conquest and colonization of the vast North American continent; the expansion of slavery and, with it, a
system of global capitalism; the growth of opposition to that system of labor, culminating in the Civil War; the
origins, as a result of that war, of a modern American nation-state; the ethnic cleansing and resettlement of the
West; and the ascension of the United States of America to global eminence as a military power. Rather than framing these events within a national narrative about the idea of Manifest Destiny or an epic struggle toward
the ideal of democracy-an approach that ignores most of the continent, divides the West from the North and
South, and frames history itself as progress-this course makes use of a global lens to analyze the borders between
and border crossings by American communities. Our foci will be the interrelations between regions and peoples;
the processes that led to alteration; and the evolution of structures that redistributed social power.
CHSS 40307. Seeing and Knowing. 100 Units.
The concept of visuality attends to the ways in which things become seeable, knowable, and governable. Scholars who study optical instruments, architecture, cinema, and media have done much to show us how visual technologies change our ways of seeing. Others in the history of science study how practices of observation transform our understanding of nature-and ourselves. This comparative course analyzes regimes of visuality in different cultural and historical contexts. After a short introduction on the philosophy of visual experience and psychology of visual perception, we will investigate a series of configurations of seeing and knowing. These sites range from the history of disability to contemporary climate science, and students will be asked to contribute visual topics from their own research or disciplines for collective exploration in our seminar. Through comparative study, we will work to develop new categories or relationships for linking perception and knowledge.
Equivalent Course(s): KNOW 40307, CMST 47007, ARTH 40307

CHSS 40308. Political Theologies of Slavery and Freedom in the Atlantic World. 100 Units.
This seminar examines the interdisciplinary form of knowledge known as "political theology" in the context of Atlantic slavery. The course will trace two major developments. First, we will explore how Christian metaphysics facilitated colonialism and slavery, focusing on the emergence of race as a theological (rather than a biological) concept and on the self-fulfilling providentialism that structured fantasies of Euro-Christian world dominance. Second, we will explore how indigenous and African cosmologies and Christianities informed enslaved resistance and abolitionism. Our readings will range from works of political theology (Augustine, Calvin, Hobbes) to early American writings (Las Casas, Ligon, Jefferson) to Black Atlantic anti-slavery texts (Wheatley, Walker, Turner). We'll consider the explorer George Best's rewriting of the biblical Curse of Ham, Francis Bacon's claim that Europe's superior technology evidenced its Chosen status, and the ideology of "hereditary heathenism" that forestalled early efforts to convert slaves to Christianity. Likewise, we'll consider the role of obeah in the Haitian Revolution, the competing attitudes toward Christian slave revolt found in fiction by Douglass and Stowe, and the continued contestation of what W. E. B. Du Bois called "the new religion of whiteness." Secondary authors may include Charles Taylor, Talal Asad, Max Weber, Colin Kidd, Rebecca Goetz, Jared Hickman, Katharine Gerbner, Jorge Cañizares-Esguerra, and J. Kameron Carter
Equivalent Course(s): KNOW 40308, CRES 30308, SCTH 40308

CHSS 40310. Topics in Medical Anthropology. 100 Units.
Over the past two decades, the field of "global health" has become the dominant narrative and organizing logic for interventions into health and well-being worldwide. This seminar will review theoretical positions and debates in anthropology, focusing on the decolonizing global health movement. Divergent historical legacies of colonialism and racism, institutionalized forms of structural violence, and modern-day extractive capitalism have resulted in stark global inequities, which currently stand at shockingly unprecedented levels. This seminar offers a critical lens to rethink contemporary global health's logic and practice by considering other histories and political formations, experiences, and knowledge production systems. This seminar opens up a space for generative dialogue on the future directions of what constitutes health, equity, and aid, and whether social justice is or should be the new imperative for action.
Equivalent Course(s): CHDV 43011, CRES 24341, HIPS 24341, KNOW 40312, KNOW 24341, ANTH 40310, ANTH 24341, CHDV 24341, HLTH 24341

CHSS 40410. Technology and Aesthetics. 100 Units.
New technologies regularly enable new mediums, styles, genres, and narrative forms as they offer us new ways to record the world, express ourselves, and tell stories. But the advent of each new artistic and literary form raises anew fundamental theoretical questions: what is the difference between an objective record of the world and an artistic rendition of it? Is what makes something art the creator's intent or the viewer's perception of it as art? That is, can something be experienced as art if it is not intended as such? What, even, is a narrative, given our minds' tendency to resolve any random pattern into a coherent series of cause and effect? And, finally, as new technologies offer endless new creative possibilities, how can we continuously recalibrate how we define art and engage with it? This class will span the 19th through the 21st centuries to explore how technological innovation has produced new literary and aesthetic forms while addressing the above questions. Its aim is two-fold: to offer a deeper understanding of literary and artistic movements and (often-canonical) texts by relating them to technoscientific concerns and contexts, and to strengthen students' foundation in literary and aesthetic theory. Thus, we will read key works of fiction that represent new aesthetic paradigms alongside scholarship that puts them into context and theoretical texts, including those of Walter Benjamin, Michael Saler, Catherine Gallagher, and Henry Jenkins.
Equivalent Course(s): KNOW 40310, ARTH 40311, ARTV 40310

CHSS 41920. The Evolution of Language. 100 Units.
This course is designed to review critically some of the literature on the phylogenetic emergence of Language, in order to determine which questions have been central to the subject matter, which ones have recurred the most, and to what extent the answers to these are now better informed. The class will also review new questions such as the following: What is the probable time of the emergence of modern language(s)? Should we speak of the emergence of Language or of languages, in the plural?
and psychologists such as Henri Bergson and Alfred Binet. They articulated a view of the human persona (including issues of identity and personality) from French philosophers. We will read the novel ‘One, No One, and 100,000’ (1926) by Luigi Pirandello and discuss how this author elaborated and incorporated into literary fiction in the genre known as ‘the novel of ideas’. As an example of the latter, we will examine questions of ecology, history, technology, political economy, literature, and ethics.

Equivalent Course(s): LING 21920, PSYC 41920, EVOL 41920, CHDV 41920, ANTH 47305, LING 41920, CHDV 21920

CHSS 43203. Capitalism and Climate Change: History, Society, Literature. 100 Units.

The new science of the Anthropocene imagines the human species as a geological agent capable of altering the life-supporting system of the planet through anthropogenic climate change and other environmental processes, which are triggered by exponential economic growth and intensive energy use. The aim of this course is to investigate the concept of the Anthropocene from the perspective of historical accounts of energy use. Our main priority will be to trace the development of the fossil-fuel economy from its British origins to the present day. We will consider the social life of energy in its full sense, ranging over questions of ecology, history, technology, political economy, literature, and ethics.

Equivalent Course(s): HIST 43203, ENGL 43204

CHSS 43204. Climate change, history and Social Theory. 100 Units.

This course considers some of the major approaches to climate change and society that have been elaborated by contemporary social and environmental theorists. Key topics include the legacies of environmental thought in classical social theory; the histories and geographies of environmental crises under capitalism; the conceptualization of ‘nature’ in relation to societal dynamics; the role of capitalism and fossil capital in the production of ‘metabolic rifts’; questions of periodization and associated debates on the ‘Anthropocene’, the ‘Capitalocene’ and the ‘Plantationocene’; the interplay between urbanization and climate emergencies; the (geo)politics of decarbonization; insurgent struggles for climate justice; and possible post-carbon futures.

Equivalent Course(s): HIST 43204, SOCI 40244, CCCT 40244, PLSC 40244

CHSS 44806. Creation and Human Creatures: Theological Explorations. 100 Units.

This course will explore the intersection between theological symbols (doctrines) of creation and human creatures. How are macrocosm and microcosm drawn into theological reflection and construction? How have human and other living creatures and nature served as reference points, exemplars, even counter examples for interpreting divine creation and the enhancement (or diminishment) of life? Explorations will include traditional theological themes of human creatures as the imago Dei and of nature as a mirror of God’s providence and majesty, as well as philosophical and literary texts on human and animal nature, the moral sense of nature, and cultivation and devastation.

Equivalent Course(s): THEO 44806, RLST 24806

CHSS 44903. Colloquium: History of Information. 100 Units.

TBD

Equivalent Course(s): HIPS 24903, HIST 44903

CHSS 45101. Agriculture: Ancient and Modern. 100 Units.

This course surveys the history of agriculture and agrarian societies from the dawn of the Neolithic to the age of genetic modification and anthropogenic warming. Topics to be discussed include the origins of agriculture, domestication, population dynamics, soil husbandry, foodways, land tenure, dietary transitions, industrial agriculture, the Green Revolution, and climate change. We will read texts by James Scott, Emmanuel le Roy Ladurie, Elinor Ostrom, Deborah Fitzgerald, and others.

Equivalent Course(s): HIST 45101

CHSS 45125. Seminar: Anthropology of the Body. 100 Units.

Drawing on a wide and interdisciplinary range of texts, both classic and more recent, this seminar will variously examine the theoretical debates of the body as a subject of anthropological, historical, psychological, medical and literary inquiry. The seminar will explore specific themes, for example, the persistence of the mind/body dualism, experiences of embodiment/alienation, phenomenology of the body, Foucauldian notions of bio-politics, biopower, queering the body, and the medicalized, gendered, and racialized body, among other salient themes.

Equivalent Course(s): CHDV 45100, GNSE 45112, ANTH 45125

CHSS 47000. Reading And Research: CHSS. 100 Units.

Readings and Research for working on their PhD

CHSS 47015. Scientific and Humanistic Contributions to Knowledge Formation. 100 Units.

In this course, we will explore whether the sciences and the humanities can make complementary contributions to the formation of knowledge, thus leading to the integration and unification of human knowledge. In the first part of the course we will take a historical approach to the issue; we will discuss how art and science were considered complementary for much of the 18th and 19th century (for example, in the views and work of Wolfgang Goethe), how they became separate (‘the two cultures’) in the middle of the 20th century with the compartmentalization of academic disciplines, and how some attempts have recently been made at a reunification under the concept of ‘consilience’. In the second part of the course, we will focus on conceptual issues such as the cognitive value of literature, the role of ideas in knowledge formation in science and literature, the role of creativity in scientific and literary production, and how scientific and philosophical ideas have been incorporated into literary fiction in the genre known as ‘the novel of ideas’. As an example of the latter, we will read the novel ‘One, No One, and 100,000’ (1926) by Luigi Pirandello and discuss how this author elaborated and articulated a view of the human persona (including issues of identity and personality) from French philosophers and psychologists such as Henri Bergson and Alfred Binet.
CHSS 47700. Reading and Research. 100 Units.
TBD

CHSS 47701. AdvRdgs: Science Studies. 100 Units.
TBD
Equivalent Course(s): ANTH 55956

CHSS 49404. Colloquium: Historical Time and the Anthropocene. 100 Units.
The course will review debates in the social sciences and the humanities on the idea of a new geological age
of the humans, the so-called Anthropocene, and discuss their implications for historiography and historical
thinking.
Equivalent Course(s): HIST 49404, SALC 49404

CHSS 50003. Sociology of the State. 100 Units.
Through taxation, regulation, redistribution, and the provision of services, modern states profoundly shape
social life and constitute a principal form of political power. This seminar will survey major theories of the
state, engaging with both comparative-historical questions (pre-modern state forms, the rise of nation-states,
the development of welfare states and economic policy regimes) and contemporary challenges of governance.
The course provides an overview of selected current research and an opportunity for those interested in
political, historical, or macro-comparative sociology to develop empirical projects with the state as an important
dimension of analysis.
Equivalent Course(s): SOCI 50003

CHSS 50100. Sem: Making Things Public. 100 Units.
TBD
Equivalent Course(s): ANTH 51015

CHSS 50755. Race/Capital/Extraction. 100 Units.
In the concluding chapters of Capital, Vol. 1, Karl Marx describes the origins of capitalism as an enterprise
"written in the annals of mankind in letters of blood and fire." This process that Marx christened as "so-called
primitive accumulation" rests fundamentally on the extraction of raw materials through colonial regimes of
enclosure and the brutal exploitation of racialized labor. Nonetheless, the relationship between race and capital is
not sufficiently elaborated in Marx's oeuvre. In turn, this course will reconsider Marxist concepts and categories
through a critical evaluation of the analytical domains of "race," "capital," and "extraction." Moreover, students
will consider the extent to which these domains productively modify each other: Does capitalism as an economic
system depend on race as its ideological substrate? Can race be understood as an extractive project founded the
violent enslavement and mercantile transit of racialized laboring subjects? How are the production of race and
the accumulation of capital transformed by extractive economies of fossils and metallic ores? To this end,
students will consult the writings of Sylvia Wynter, W.E.B. Du Bois, C.L.R. James, Claudia Jones, Walter Rodney,
and Octavia Butler.
Equivalent Course(s): CRES 50755, ANTH 50755

CHSS 51310. Images and Science. 100 Units.
TBD
Equivalent Course(s): ARTH 41310, ENGL 51310

CHSS 51601. Material Histories of the Modern World, c. 1700 to the present. 100 Units.
This seminar explores the changing relationship between people and things in modern and contemporary
history and introduces students to major historical interpretations, methods and sources. In the seminar, we will
read classic as well as recent texts. Case studies will include the debate about the "industrious" and "consumer
revolutions"; commodity biographies (sugar, tea, cotton); histories of comfort; town planning and mobility in
20th century Britain and Japan; food and diet in the British empire; waste in Republican Beijing; the material
culture of the home in the Eastern Bloc; energy transitions and everyday life.
Equivalent Course(s): HIST 51601, CEGU 51601

CHSS 51609. Concepts in Clinical Medical Ethics. 100 Units.
Philosophical concepts are rife at the hospital bedside. An account of their proper clinical use requires both
philosophical analysis and pragmatic judgment. In this seminar we will look closely at such central clinical
concepts as paternalism, autonomy, surrogate decision-making, and decisional capacity. We will also examine
the ethics of the disputed clinical practices of framing and slow codes. We will finish by asking in what way, in
a world of hospital medicine - that is, of stranger medicine -- the concept of patient/physician trust can play a
positive role. American clinical medicine uses a moral model that is not much more than a generation old. The
point of the seminar is to examine and assess the components of that model to see how far and in what ways the
model needs to be changed. (f)
Equivalent Course(s): PHIL 51609

CHSS 51725. The Irreducibility of the Mind. 100 Units.
Cognitive science, and much allied work in metaphysics and epistemology, adopts a 'naturalistic' orientation
to the mind: they treat thought, perception, reasoning, intentional agency, and so on as phenomena tractable
to natural-scientific explanation. On the other hand, some of the deepest ideas that emerged from 20th century
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philosophy stand in apparent opposition to this orientation. In various way, they suggest that a 'naturalism' of the mind does not make sense. In this seminar we will do our best to understand and adjudicate this dispute. (II)
Equivalent Course(s): PHIL 51725

CHSS 51802. Climate Ethics. 100 Units.
Anthropogenic climate change is the largest challenge facing human civilization. Its physical and temporal scale and unprecedented complexity at minimum require extensions of existing ethical systems, if not new ethical tools. This course will begin by examining natural and social-scientific studies of climate change and its current and predicted effects (e.g. the reports of the Intergovernmental Panel on Climate Change and the Stern Review). Most of the course will examine how religious and philosophical ethical systems respond to the vast temporal and spatial scales of climate change and its inherent uncertainties. For instance, common principles of environmental ethics such as justice and responsibility are often reimagined in climate ethics. We will also explore the degree to which the assumptions of many modern Western ethical systems including linear causality, an emphasis on individuals, and purely rational decision-making foster or inhibit climate ethics. In the course, we will take a comparative approach to environmental ethics and may examine perspectives from secular Western philosophy, Christianity (Catholic and Protestant), Buddhist, and Islamic thought.
Equivalent Course(s): CEGU 51802, KNOW 51802, RETH 51802

CHSS 51947. Techno-Natures: Anthropology and Science Fiction. 100 Units.
This graduate seminar explores science fiction narratives alongside anthropological theory and ethnographic practice in an attempt to develop novel theoretical and methodological interventions into questions concerning environment, governance, the body, and the relationship between humans and machines. In so doing the course aims to elaborate potential correspondences between anthropology and science fiction, with particular focus on re-conceptualizing nature in relation to post-apocalyptic narratives and crises of the Anthropocene. Following science fiction's speculative process, the course encourages a mode of inquiry that is experimental in order to explore the ways in which science fiction might operate as ethnographic thought experiment while challenging received understandings of the nature of empirical evidence. Course material will include science fiction texts as well as films.
Equivalent Course(s): ANTH 51947

CHSS 52715. Anticipatory Knowledge. 100 Units.
Prognosis, prediction, forecasting, risk, threat - we live at a time of proliferating expert anticipatory futures. This seminar explores how the future is brought into the present as a means of establishing new modes of governance. It focuses on the historical evolution of expert regimes from closed world systems to emerging forms, tracking how notions of danger (marked as crisis, disaster, and catastrophe) index and invade the present. The seminar approaches expert futurism as a vehicle for thinking through complex systems, ethics and knowledge production, and the role of the imaginary in security institutions (crossing techno-scientific, military, financial, environmental, and health domains).
Equivalent Course(s): ANTH 52715, CEGU 52715

CHSS 52900. Wksp: Evol Proc: Bio/Lang/Cult. 100 Units.
TBD
Equivalent Course(s): LING 49000, PHIL 52800

CHSS 53001. Frege. 100 Units.
TBD
Equivalent Course(s): PHIL 53000

CHSS 53003. Explanation. 100 Units.
This course surveys recent work on explanation across philosophical disciplines. Beginning with classic accounts of scientific explanation we will proceed to consider recent work on mechanical explanation, mathematical explanation, causal explanation (particularly in the physical and social sciences), the relation between explanation and understanding, and metaphysical explanation (particularly the idea of explanation as ground).
Equivalent Course(s): PHIL 53003, KNOW 53003

CHSS 53105. Philosophy of Mathematics. 100 Units.
TBD
Equivalent Course(s): PHIL 53105

CHSS 53506. Non-Deductive Inference. 100 Units.
This course will examine modern non-Bayesian ways of understanding non-deductive inference. Topics include the problem of induction, Pierce's theory of abduction, inference to the best explanation, and the general connection between explanation and non-deductive inference.
Equivalent Course(s): PHIL 53506

CHSS 53709. Conceptual Change and the a-priori. 100 Units.
Equivalent Course(s): PHIL 53709
CHSS 53991. Religion and Psychoanalysis. 100 Units.
Freud postulated that many cultural activities with no apparent connection to sexuality, including religious practice and belief, have their origin in the sexual instincts. Sublimation, which describes the process by which the sexual instincts are diverted to nonsexual aims or objects, plays a crucial role in Freudian metapsychology. And yet Freud never managed to articulate a coherent account of this process, and thus he failed to provide a concept of sublimation as such. In this class we will study the role of sublimation in Freudian metapsychology with specific reference to the theme of religiosity. In examining how sublimation is taken up by others (e.g. Klein, Lacan) we will also consider whether this concept affords a novel understanding of religion.
Equivalent Course(s): THEO 53991, DVPR 53991, KNOW 53991

CHSS 54320. Contagion: Ethics and the Other. 100 Units.
This is a graduate seminar which explores the complex ways that epidemic disease has shaped and been shaped by religion, philosophy, literature, and the emerging sciences of modernity. Contagion has long been a central moral problem in theology and philosophy; the organizing terror of all human civilization because of the sudden, stochastic, and terrifying spread of visible, embodied changes. Contagion is our most intimate companion: Plague as punishment, as test, and as a sign of divine judgement have long been a topic of sacred texts, defining how societies thought about, duties, telos, meaning, and salvation. Contagious diseases raise stark ethical choices as well. The uses of quarantine as a defense, the establishment of isolation, and the fear of the stranger mark the historical responses to plagues. In this course, we will consider both the science behind the plagues that have torn across the course of human history, and the sacred and secular textual responses to them. Plagues leave behind cultural artifacts and traces of the puzzle of human behavior in response to epidemics: compliance, resistance imagination, and innovation. We will explore this theme in all its complexity, focusing on the textual and literary responses to the challenge of contagion.
Equivalent Course(s): KNOW 54320, RETH 54320

CHSS 54831. Engineered Worlds: Alterlife. 100 Units.
Engineered Worlds: Alterlife
Equivalent Course(s): ANTH 54831

CHSS 54833. Engineered Worlds III: Terraformations. 100 Units.
This experimental seminar is part of a larger series of events in 2019-20 organized under the Engineered Worlds theme. It will be linked to activities on several other campuses as well as a spring 2020 conference. It examines the effects of industrial living on the biosphere and considers the multiple ways that people have been involved in terraforming planet earth. Attending to the ways that race, gender, and class inform industrial life, the seminar will explore (via social theory, ethnography, and history) ways of thinking about planetary scale problems that have local intensities that matter. This is an advanced graduate seminar. Registration is by permission of instructor.
 Equivalent Course(s): ANTH 54833

CHSS 55100. The Development of Whitehead’s Philosophy of Nature. 100 Units.
Alfred North Whitehead’s philosophy has seen a resurgence of academic interest in recent years via a line of influence passing through Deleuze and Latour. Meanwhile, Whitehead’s Process and Reality (1929) has gained a reputation, not undeserved, as possibly the most challenging English language text in the philosophical canon; it is seldom read in a department of philosophy. This is a pity, since the striking originality and creative potential of the philosophy contained within is unmatched. This course offers an opportunity for a gradual approach to understanding the “philosophy of organism” of Process and Reality by first taking in the foothills of earlier and less obtuse Whitehead texts Concept of Nature and Science and the Modern World. We will supplement these readings with newly discovered notes from Whitehead’s Harvard lectures (published just last year). These documents reveal Whitehead in meditative mood, thinking through in real time his philosophical concerns. With their help, this course will explore the striking continuity of his earlier natural philosophy with the mature philosophy of Process and Reality and so provide a more gentle ascent to the heady realms of “actual entities”, “concrescence” and “conceptual feelings” described therein. (II)
Equivalent Course(s): KNOW 55100, PHIL 55100

CHSS 55792. Naturalized Metaphysics. 100 Units.
This course examines the feasibility of doing metaphysics in a way that is responsive to, or determined by, the results of the natural sciences. In an influential book, Everything Must Go: Metaphysics Naturalized, published just over 15 years ago, philosophers of science James Ladyman and Don Ross advocated for a newly naturalized metaphysics and argued forcefully against alternative analytic approaches to metaphysics (in a chapter later described by Kyle Stanford as ‘embod[y]ing the most admirable characteristics of a good slap across the face”). Unsurprisingly, many analytic metaphysicians responded defensively to this assault. Aside from providing the occasion for a good philosophical dispute, however, this debate resulted both in a literature full of fascinating methodological reflections on metaphysics, and a camp of metaphysicians who decided that being responsive to the results of science might not be a bad idea, leading to the creation of a (now thriving) Society for the Metaphysics of Science. As it happens, though, the outgoing President of the Society, Kerry McKenzie, has apparently become disillusioned with the project, arguing against the possibility of metaphysics tout court in a recent paper entitled “A Curse on Both Houses.” Against this argument we will place the detailed work of self-avowed naturalized metaphysicians, including David Wallace's award-winning book The Emergent Multiverse.
CHSS 55804. Naturalized Metaphysics. 100 Units.
This course explores the feasibility of doing metaphysics in a way that is responsive to, or determined by, the results of the natural sciences. In an influential book, Everything Must Go: Metaphysics Naturalized, published just over 15 years ago, philosophers of science James Ladyman and Don Ross advocated for a newly naturalized metaphysics and argued forcefully against alternative analytic approaches to metaphysics (in a chapter later described by Kyle Stanford as ‘embod[y]ing the most admirable characteristics of a good slap across the face’). Unsurprisingly, many analytic metaphysicians responded defensively to this assault. Aside from providing the occasion for a good philosophical dispute, however, this debate resulted both in a literature full of fascinating methodological reflections on metaphysics, and a camp of metaphysicians who decided that being responsive to the results of science might not be a bad idea, leading to the creation of a (now thriving) Society for the Metaphysics of Science. As it happens, though, the outgoing President of the Society, Kerry McKenzie, has apparently become disillusioned with the project, arguing against the possibility of metaphysics tout court in a recent paper entitled “A Curse on Both Houses.” Against this argument we will place the detailed work of self-avowed naturalized metaphysicians, including David Wallace’s award-winning book The Emergent Multiverse.
Equivalent Course(s): PHIL 55792

CHSS 56801. Introduction to Environmental History. 100 Units.
We live in an age of planetary emergency. Environmental history offers a powerful lens to explore the historical roots of the present moment. This course introduces graduate students to the history of the field, sampling its methods and toolbox, strengths and weaknesses. Readings include a survey of the classics (Merchant, Cronon and Worster) as well as a number of new voices (Demuth, Barnett, Seow).
Equivalent Course(s): CEGU 56801, HIST 56801

CHSS 56900. Colloquium: The Scientific Image-Formalism, Abstraction, and Realism. 100 Units.
This course explores the broad field of scientific image-making, focusing in particular on problems of formalism, abstraction, and realism. What makes a “good” scientific image? What kind of work do scientific images do? What philosophical, ideological, and political constraints underwrite attempts to render the complexity of events and entities in the world in stylized visual vocabularies? And how might we approach the work of aesthetics and style in image-making? We will examine these questions through a survey of several contemporary scholarly frameworks used for thinking about problems of representation in scientific practice and will attend to such image-making practices as graphing, diagramming, modeling, doodling, illustrating, sculpting, and photographing, among other methods.
Equivalent Course(s): CEGU 56801, HIST 56801

CHSS 57000. +/-: Molding, Casting, and the Shaping of Knowledge. 100 Units.
Of all technologies of reproduction and resemblance, those of molding and casting are perhaps the most intimate. An object, a sculpture, a creature, a person is slathered in plaster (or some other form-hugging material), and the resulting “negative” image is rendered into a “positive” replica. This course explores the various historically and culturally contingent meanings that have been attached to these technical procedures—despite their ostensibly “styleless” or “anachronistic” character—from the ancient world to the present day. Used in practices ranging from funerary rituals to fine art, natural history to medicine, anthropology to forensics, molding and casting constitute forms of knowledge production that capture at once the real and the enduring, the ephemeral and fleeting, and the authentic and affective. Featuring a diverse set of readings by authors such as Pliny the Elder, Charles Sanders Peirce, Walter Benjamin, Oswald Spengler, Gilbert Simondon, and others, the colloquium will address theoretical and methodological questions pertaining to concepts of materiality, indexicality, tactility, scalability, and seriality. Besides plaster, the objects of our analysis will comprise a diverse range of media including but not limited to wax, metal, photography and film, synthetic polymers, and digital media.
Equivalent Course(s): ANTH 54835, KNOW 57000, ARTH 47300, HIST 57000

CHSS 57200. Colloquium: Infrastructure in History-Theory, Materiality, and Power. 100 Units.
Dams, sewers, railroads, water pipes, power lines, barbed wire, and garbage dumps: long treated as virtually invisible, the study of infrastructure has exploded in recent years. This colloquium will explore different theoretical and methodological approaches to the history of infrastructure. What are the best methodological tools for studying the history of large technological systems? What is the relationship of infrastructure with capitalism, settler and liberal colonialism, and postcolonial development? How should we theorize and write about nonhuman agency, especially in an age of ecological crisis? While reading and critiquing recent historical classics, we will also venture across disciplinary boundaries to examine innovative approaches arising out of science and technology studies, anthropology, urban geography, and the environmental humanities.
Equivalent Course(s): HIST 57200

CHSS 58108. The Philosophy of Howard Stein. 100 Units.
Howard Stein’s impressive body of work is notable for its tight integration of history of science with philosophy of science. Topics include: theories of spacetime structure (Newtonian and relativistic), the conceptual structure of quantum mechanics, the methodology of science in general and the character of scientific knowledge, and the history of physics and mathematics. Readings by Stein will be supplemented by primary historical texts and secondary philosophical literature, including selections from a forthcoming edited collection on Stein.
CHSS 60905. Colloquium: Topics in Early Modern Europe. 100 Units.
This colloquium introduces graduate students to important themes in early modern history, providing an opportunity to get to grips with both classic interpretations and new arguments in the field. The subjects addressed will vary from year to year, depending on the faculty member leading the class and the interests of the participants. They will generally include a comparative element, however. Students will be expected to gain experience in interpreting historical evidence while appraising historiographical debates. The course will require historiography essays and may serve as an incubator for research papers.
Equivalent Course(s): HIST 60905

CHSS 66900. Colloquium: Reading Marx’s Ecology. 100 Units.
In this course we will read Marx’s own ideas in their historical context and then explore commentaries on them by Paul Burkett, John Bellamy Foster, and others to see what of Marx’s ideas can be productively used in environmental history and in discussions of the Anthropocene.
Equivalent Course(s): HIST 66900

CHSS 67603. Public History Practicum I. 100 Units.
In this two-quarter course students will engage in the theory and practice of public history in partnership with organizations doing community-oriented work in a variety of areas. In the winter colloquium, we will read and discuss the theory and practice of public history as well as materials relevant to the projects you will pursue in the spring. In the spring practicum, you will work in groups of 3-5 directly with one of the partner organizations. All of the project-based work will be done collaboratively; working with partners means that there will be hard deadlines. Projects and coursework will be designed to be adaptable to current public health conditions. A showcase presentation of the projects is scheduled for the end of the spring quarter, by which time you will have become acquainted with current scholarship on public history and with experience in its actual practice. The final projects will be part of your portfolio and may be listed on your c.v.
Equivalent Course(s): RDIN 67603, SOCI 50126, ARTH 47603, ANTH 54610, HIST 67603

CHSS 67604. Public History Practicum II. 100 Units.
See HIST 67603
Equivalent Course(s): SOCI 50127, RDIN 67604, HIST 67604, ARTH 47604, ANTH 54611

CHSS 70000. Advanced Study: Conceptual & Historical Studies of Science. 300.00 Units.
Advanced Study: Conceptual & Historical Studies of Science