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/ (https://socialsciences.uchicago.edu/admissions/apply/). Questions pertaining to admissions and aid should be directed to ssd-admissions@uchicago.edu or (773) 702-8415.

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 (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 eighteen courses at the University for a grade of B or better, including at least seven CHSS courses. 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.

The expected timetable is that students entering with a master’s degree will complete coursework by the end of the second year, and those entering without will complete it by the end of year three (see the website for this and other details of the expected timetable).

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.

Students must then pass two oral examinations. Each student has the option of taking the exams in history of science, philosophy of science, sociology of science, or anthropology of science; but at least one of the exams must be in either history of science or philosophy of science. These exams are, in part, designed by the students themselves.

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.

**COURSES**

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

**CONCEPTUAL AND HISTORICAL STUDIES OF SCIENCE COURSES**

**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.

Instructor(s): Lorraine Daston

Terms Offered: Not offered 21-22.

Equivalent Course(s): SCTH 30925, HIST 39517, PHIL 20925, HIST 29517, KNOW 40303, PHIL 30925, CLAS 37316
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.

Terms Offered: Not offered in 21-22.
Prerequisite(s): Lorraine Daston
Equivalent Course(s): SCTH 30927, KNOW 31415, SALC 30927, HREL 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, Cassirer, Huizinga, Lovejoy, and Frances Yates, to understand how powerful vision of the past can transcend its own present.

Instructor(s): Lorraine Daston
Terms Offered: Not offered in 21-22.
Prerequisite(s): Permission of instructor.
Equivalent Course(s): KNOW 30928, SCTH 30928, HIST 45002

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.

Instructor(s): Lorraine Daston
Note(s): Instructor's consent required.
Equivalent Course(s): HIST 45003, SCTH 30929

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.

Instructor(s): Lorraine Daston
Terms Offered: TBD. Course is not being offered AY 21-22.
Prerequisite(s): Reading knowledge of at least one other language besides English; students who wish to enroll in the seminar should contact the instructor directly by email.
Note(s): Note: This course will be taught during the first 5 weeks of the quarter.
Equivalent Course(s): HIST 45004, SCTH 30961

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."

Instructor(s): R. Richards
Terms Offered: Autumn
Note(s): German would be helpful, but it is not required.
Equivalent Course(s): KNOW 31302, GRMN 25304, HIST 35304, PHIL 20610, HIPS 26701, FNDL 25315, PHIL 30610, GRMN 35304, HIST 25304

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.

Instructor(s): F. Albritton Jonsson
Terms Offered: Winter
Equivalent Course(s): HIPS 21404, KNOW 31410, HIST 21404, LLSO 21404, ENST 21404, HIST 31404
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 recreation, and hermaphrodites and questions about the "sex" of the enlightened scientist and the gendering of scientific practices.
Equivalent Course(s): GSSE 21413, KNOW 21413, HIPS 21413, HIST 22118

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.
Instructor(s): Adrian Johns Terms Offered: Autumn. Offered in Autumn 2020
Equivalent Course(s): SOCI 40137, HIST 56800, KNOW 31408, ANTH 32305, HIPS 22001

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.
Instructor(s): Iris Clever Terms Offered: Autumn
Equivalent Course(s): SOCI 30325, CRES 32012, KNOW 32012, HIPS 22102, ANTH 33336, KNOW 22012

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, 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): ENST 22708, HIST 22708, KNOW 22708, HIPS 22008, HIPS 22708

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.
Instructor(s): S. Stigler Terms Offered: Not offered in 2021-2022.
Prerequisite(s): Prior statistics course
Equivalent Course(s): STAT 36700, HIPS 25600, STAT 26700

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)
Instructor(s): T. Pashby Terms Offered: Winter
Equivalent Course(s): PHIL 32000, PHIL 22000, HIST 25109, HIST 35109, HIPS 22000
CHSS 33500. Elementary 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.
Instructor(s): G. Schultheis Terms Offered: Autumn Winter
Equivalent Course(s): PHIL 30000, LING 20102, PHIL 20100, HIPS 20700

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.
Instructor(s): R. Fulton Brown Terms Offered: Winter
Equivalent Course(s): FNDL 25688, HIST 33519, MDVL 23519, HIST 23519, HIPS 23519

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.
Instructor(s): F. Albritton Jonsson Terms Offered: Winter
Equivalent Course(s): HIST 35014, HIST 25014, HIPS 25014, ENST 25014

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, Furet, Hempel, Danto. (B) (III)
Instructor(s): R. Richards Terms Offered: Winter
Equivalent Course(s): HIST 25110, HIPS 25110, PHIL 20506, PHIL 30506, HIST 35110, KNOW 31401

CHSS 35121. The Brazil-Argentina Nuclear Cooperation Agreement and Thermoelectric Transition in Brazil. 100 Units.
In this course we present a history of Brazil-Argentina nuclear cooperation and how Brazil is planning the transition of its electric matrix from predominantly hydraulic towards a mix with increased share of nuclear power. Proliferation risks are a main concern of international community when nuclear programs expansion is considered. The Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials, created in 1991, has been fundamental in assuring the international community (via the International Atomic Energy Agency) that the nuclear materials and facilities of both countries are being used for peaceful purposes. Domestically, the debate has been environmental in nature, and concerns topics ranging from mining to power generation, and from radioactive materials disposal to radiation effects in living organisms and major accidents. These diplomatic, environmental, social and political issues are in turn dependent on technical details of the thermoelectric generating process, and this nexus of issues provides the topics for the course.
Instructor(s): Ramos, Alexandre Terms Offered: Autumn
Note(s): Tinker Visiting Professor Autumn 2018
Equivalent Course(s): HIPS 25121, LACS 35121, PPHA 39921, LACS 25121

CHSS 35309. History of Perception. 100 Units.
Knowing time. Feeling space. Smelling. Seeing. Touching. Tasting. Are these universal aspects of human consciousness, or particular experiences contingent upon time, place, and culture? How do we come to know about our own perceptions and those of others? This course examines these and related questions through detailed readings of primary sources, engagement in secondary scholarship in the history and anthropology of sensation, and through close work with participants’ own sensations and perceptions of the world around them.
Equivalent Course(s): KNOW 31404, HIPS 25309, ANTH 24308, HIST 25309, ANTH 34308, KNOW 21404, HIST 35309

CHSS 35408. The History of Suggestion. 100 Units.
This course examines the history of studies of the nature of what has commonly become known as suggestion—subtle influences over personal and group behavior that are thought to affect us outside our conscious awareness or control. The idea of an unconscious influence of this kind has deep roots, but it was only in the nineteenth and twentieth centuries that it became a major focus of research, controversy and reflection. The course will examine the development and significance of characterizations of suggestion and related concepts of subtle influence in medicine, advertising, and various fields in the sciences. Course materials will include primary sources in those areas, literary materials, and film.
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Instructor(s): A. Winter Terms Offered: Winter
Equivalent Course(s): HIST 35408, HIPS 25408, HIST 25408

CHSS 35415. History of Information. 100 Units.

Everybody knows that ours in an information age. No previous generation ever enjoyed access to the mass of material made available by Google, iTunes, Amazon, and the like. At the same time, however, no previous generation ever had its reading, listening, and traveling so thoroughly tracked, recorded, data-mined, and commercialized. Information thus shapes our culture for both good and ill, and it is up to us to understand how. This course provides students with the materials to do that. It ranges across centuries to trace how information has been created, circulated, and controlled. In short, it tells us how our information age came into being, and why it has generated the issues with which it now confronts us.

Instructor(s): A. Johns Terms Offered: Spring
Equivalent Course(s): HIST 25415, KNOW 35415, HIPS 25415, LLSO 23501, KNOW 35415, HIST 35415

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 grassroots 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."

Instructor(s): L. Chatterjee Terms Offered: Spring
Equivalent Course(s): HIST 35024, HIST 25025, ENST 25025, HIPS 25525, SALC 25025, SALC 35025

CHSS 36054. SIFK MAPSS Core: Ways of Knowing. 100 Units.

This seminar introduces students to the practices and principles that guide the nascent field of inquiry into the formation of knowledge. "Ways of Knowing" examines how claims to knowledge are shaped by disciplinary, social, historical, and political contexts, as well as local cultural factors both explicit and unspoken. How do we know what we know? How have cultures and scholars contested, reconfigured, and defamiliarized accepted claims to knowledge? Building on social science perspectives and methods, this course will explore the formation of knowledge through key historical, sociological, and anthropological case studies. Furthermore, the course will take an expansive approach to knowledge formation by considering the interface of theory, practice, and social action. "Ways of Knowing" is a required seminar for all students wishing to undertake the Formation of Knowledge MAPSS track (https://sifk.uchicago.edu/mapss/)

Instructor(s): Katherine Buse, Isabel Gabel Terms Offered: Winter
Equivalent Course(s): HIST 35103, KNOW 36054, HIPS 26054

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 Daiichi, 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

Instructor(s): L. Chatterjee Terms Offered: Spring
Equivalent Course(s): HIPS 26059, SOCI 30329, KNOW 36059, 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 atrocity? This course will explore a set of exemplary fields in order to track genealogies and discontinuities in classification. 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 conve

Instructor(s): Alexander Campolo Terms Offered: Spring
Equivalent Course(s): SOCI 30331, DIGS 30019, HIPS 26065, SCTR 36065, DIGS 20019, KNOW 36065

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 reserves 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.
Instructor(s): Bradley Bolman Terms Offered: Winter
Equivalent Course(s): HIST 35015, KNOW 36071

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.
Instructor(s): Anastasia Klimchynskaya Terms Offered: Winter
Equivalent Course(s): KNOW 36088, CMLT 36088

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.
Instructor(s): Brian Callender, MK Czerwiec Terms Offered: Spring
Prerequisite(s): No prior knowledge or experience of graphic novels, comics, drawing, or medicine required.
Equivalent Course(s): HIPS 27015, KNOW 37015, ENGL 27015, HLTH 27015, KNOW 27015

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 Hippocratics 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.
Instructor(s): R. Richards Terms Offered: Autumn
Note(s): For students taking PHIL 23405, the course is (B) (II).
Equivalent Course(s): HIST 25104, KNOW 37402, PHIL 33405, HIPS 25104, PHIL 23405, HIST 35104
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.
Instructor(s): D. Maestripieri Terms Offered: Autumn
Prerequisite(s): N/A
Note(s): Distribution requirements: 1
Equivalent Course(s): CHDV 37860, HIPS 27860, HLTH 27860, CHDV 27860, KNOW 27860

CHSS 38003. Hegel’s Phenomenology of Spirit. 100 Units.
Our goal in this course will be to read through and understand the most important chapters of Hegel’s revolutionary book. Main topics will include Hegel’s new conception of philosophy and philosophical methodology, his agreements and disagreements with Kant, the nature of self-consciousness and human mindedness in general, individuality and sociality, and the relation between philosophy and history. (V)
Instructor(s): Robert Pippin Terms Offered: Winter
Prerequisite(s): Undergraduates should have some background in philosophy; a knowledge of Kant would be especially helpful.
Equivalent Course(s): PHIL 38202, FNDL 23410, PHIL 28202, SCHR 38003

CHSS 38400. Darwin’s "On the Origin of Species" and "The Descent of Man" 100 Units.
This lecture-discussion class 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) (II)
Instructor(s): R. Richards Terms Offered: Winter
Equivalent Course(s): HIST 34905, HIST 24905, HIPS 24901, PHIL 23015, FNDL 24905, PHIL 33015

CHSS 39405. Advanced Logic. 100 Units.
Since Russell's discovery of the inconsistency of Frege's foundation for mathematics, much of logic has resolved around the question of to what extent we can or cannot prove the consistency of the basic principles with which we reason. This course will explore two main efforts in this direction. We will first look at proof-theoretic efforts towards demonstrating the consistency of various foundational systems, discussing the virtues and limitations of this approach. We will then closely examine Godel's theorems, which are famous for demonstrating limits on the extent to which we can formulate consistency proofs. Much has been written on the implications of Godel's theorems, and we will spend some time trying to carefully separate what they really entail from what they do not entail. Assessment will be by regular homework sets. Intermediate logic or prior equivalent required. (II) and (B).
Instructor(s): K. Davey Terms Offered: Spring
Prerequisite(s): Elementary Logic or equivalent
Equivalent Course(s): PHIL 29405, FNDL 24905, PHIL 33015

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): PHIL 43011, HIST 66606, DVPR 46616, CLAS 46616, KNOW 40201

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 umwelt, 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.
Instructor(s): Nicolette I. Bruner Terms Offered: Winter
Note(s): This course fulfills part of the KNOW Core Seminar requirement to be eligible to apply for the SIFK Dissertation Research Fellowship. No instructor consent is required, but registration is not final until after the 1st week in order to give Ph.D. students priority.
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, eocriticism, ecosfeminism, 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.
Instructor(s): Nicolette I. Bruner Terms Offered: Winter
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.
Instructor(s): Isaiah Lorado Wilner Terms Offered: Winter
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.
Instructor(s): Yan Slobodkin Terms Offered: Winter
Equivalent Course(s): KNOW 40207, HMRT 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.
Instructor(s): Anastasia Klimchynskaya Terms Offered: Winter
Equivalent Course(s): KNOW 40208

This course critically examines concepts of "nature" and "artifice" in the formation of scientific knowledge, from the Babyloniens 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 three modules of investigation: 1) Nature, 2) Artifice, and 3) Liminal: Neither Natural nor Artificial.
Instructor(s): Margaret Carlyle, Eduardo Escobar, Jennifer P. Daly Terms Offered: Spring
Note(s): This course fulfills part of the KNOW Core Seminar requirement to be eligible to apply for the SIFK Dissertation Research Fellowship. Ph.D. students must register with the KNOW 40304 course number in order for this course to meet the requirement.
Equivalent Course(s): HIST 34920, CRES 40304, KNOW 40304, GNSE 40304, HIIPS 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 manuscript studies 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.
Instructor(s): J. Stadolnik Terms Offered: Spring
Note(s): This course fulfills part of the KNOW Core Seminar requirement to be eligible to apply for the SIFK Dissertation Research Fellowship. No instructor consent is required, but registration is not final until after the 1st week in order to give Ph.D. students priority.
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 empire. 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.
Instructor(s): Isaiah Lorado Wilner Terms Offered: Spring
Note(s): This course fulfills part of the KNOW Core Seminar requirement to be eligible to apply for the SIFK Dissertation Research Fellowship. No instructor consent is required, but registration is not final until after the 1st week in order to give Ph.D. students priority.
Equivalent Course(s): HIST 37013, KNOW 40306

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.
Instructor(s): Alex Campolo Terms Offered: Spring
Equivalent Course(s): ARTH 40307, KNOW 40307, CMST 47007

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
Instructor(s): Alex Mazzaferrro Terms Offered: Spring
Equivalent Course(s): KNOW 40308, SCTH 40308, CRES 30308

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.
Instructor(s): P. Sean Brotherton Terms Offered: Not Offered 2021-22; may be offered 2022-23
Prerequisite(s): Strongly recommended: previous lower-division courses in the social studies of health and medicine through ANTH, HIPS, HLTH, or CHDV
Note(s): This is an advanced reading seminar. Among undergraduates, 3rd and 4th year students are given priority. Consent only. Use the online consent form via the registrar to enroll.
Equivalent Course(s): KNOW 24341, CRES 24341, CHDV 24341, HIPS 24341, ANTH 40310, CHDV 40301, KNOW 40312, ANTH 24341, HLTH 24341

CHSS 40410. Technology and Aesthetics. 100 Units.
The idea of technological "progress" is a contested one, but it cannot be denied that innovation, at the very least, is a continuous process. Technological innovations regularly enable new mediums, new styles, new genres, and new subject matter as they offer us new ways to record the world, express ourselves, and tell stories. And because art is one of the fundamental lenses through which we see the world, the advent of new artistic and literary forms constantly offers us new ways to know. Each transformation in both creation and reception, however, raises anew fundamental theoretical questions: what is the difference between an objective record of the world and an artistic rendition of it? After touching briefly on the revolution brought about by Gutenberg’s invention of the printing press, this class will span the 19th through the 21st centuries to explore how technological innovation has led to new literary and aesthetic forms. Though the primary focus will be on literary texts, the course is intended as an interdisciplinary one, incorporating visual art and media. Class sessions will include visits to the Rare Book Collection, local art museums, and, potentially, Chicago-area theatre performances. For their final projects, students will be able to choose between a research paper or a creative project that engages with the questions and concerns of the course.
Instructor(s): Anastasia Klimchynskaya Terms Offered: Spring
Equivalent Course(s): ARTH 40311, ARTV 40310, KNOW 40310

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.
Instructor(s): N. Brenner, F. Albritton Jonsson Terms Offered: Autumn
Prerequisite(s): Some previous course work in classical and/or contemporary social theory, preferably at the graduate level
Equivalent Course(s): SOCI 40244, CCCT 40244, HIST 43204, PLSC 40244

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.
Instructor(s): P. Sean Brotherton Terms Offered: TBD. Not offered in 2020-21
Equivalent Course(s): GnSe 45112, CHDV 45100, ANTH 45125

CHSS 45300. 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.

Instructor(s): E. Kern
Terms Offered: Winter
Prerequisite(s): Upper-level undergraduates with consent of instructor.
Equivalent Course(s): HIST 45300

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.

Instructor(s): D. Maestripieri
Terms Offered: Winter
Note(s): Satisfies CHD graduate program distribution (1) Comparative Behavioral Biology
Equivalent Course(s): CHDV 47015, KNOW 47015, SCTH 47015

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 fossil fuels 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.

Instructor(s): Ryan Jobson
Terms Offered: Winter. Winter 2022
Equivalent Course(s): CRES 50755, ANTH 50755

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.

Instructor(s): Michael Fisch
Terms Offered: Winter. Winter 2019
Equivalent Course(s): ANTH 51947

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. (III)

Instructor(s): K. Davey
Terms Offered: Winter
Equivalent Course(s): PHIL 53506

CHSS 53709. Conceptual Change and the a-priori. 100 Units.
(II) and (III)

Instructor(s): K. Davey
Terms Offered: Winter
Equivalent Course(s): PHIL 53709
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.
Instructor(s): Joseph Masco Terms Offered: Autumn. Autumn 2019
Prerequisite(s): Consent of Instructor
Note(s): Course will involve Skyped in participants from another university.
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)
Instructor(s): T. Pashby Terms Offered: Autumn
Equivalent Course(s): PHIL 55100, KNOW 55100

CHSS 55978. AdvRdgs in Technoscience. 100 Units.
Advanced Readings
Equivalent Course(s): ANTH 55973

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.
Instructor(s): M. Rossi Terms Offered: Spring
Prerequisite(s): Consent of instructor; open to MA and PhD students only.
Equivalent Course(s): HIST 56900

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 interdisciplinary boundaries to examine innovative approaches arising out of science and technology studies, anthropology, urban geography, and the environmental humanities.
Instructor(s): E. Chatterjee Terms Offered: Winter
Prerequisite(s): Open to MA and PhD students only.
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. (II)
Equivalent Course(s): PHIL 58108
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.
Instructor(s): F. Albritton Jonsson & D. Chakrabarty Terms Offered: Spring
Equivalent Course(s): HIST 66900

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