Interim Chair (2020-2021)
• Michael Rossi, History

Chair (on leave 2020-2021)
• Adrian Johns, History

Professors
• Fredrik Albritton Jonsson, History
• Lorraine Daston, Social Thought
• James A. Evans, Sociology
• Adrian Johns, History
• Karin Knorr Cetina, Sociology and Anthropology
• Joseph Masco, Anthropology
• Karl Matlin, Department of Surgery
• Salikoko Mufwene, Linguistics
• Robert J. Richards, History
• Michael Rossi, History
• James T. Sparrow, History
• Stephen M. Stigler, Statistics
• Kaushik Sunder Rajan, Anthropology

Emeritus Faculty
• Arnold Davidson, Philosophy
• Judith B. Farquhar, Anthropology
• Jan Goldstein, History
• Robert Perlman, Pediatrics
• 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 (bmmackev@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) 702-8415.

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/.

**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/

**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 philosophcal 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): CLAS 37316, HIST 29517, KNOW 40303, SCTH 30925, HIST 39517, PHIL 20925, PHIL 30925
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): HIST 21404, HIPS 21404, HIST 31404, LLSO 21404, ENST 21404
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 procreation, and hermaphrodites and questions about the “sex” of the enlightened scientist and the gendering of scientific practices.
Equivalent Course(s): KNOW 21413, HIST 22218, HIPS 21413, 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.
Instructor(s): Adrian Johns Terms Offered: Autumn. Offered in Autumn 2020
Equivalent Course(s): SOCI 40137, KNOW 31408, ANTH 32305, HIST 56800, HIPS 22001

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, ENST 22708, HIST 22708, HIST 32708, HIPS 22708, KNOW 32808

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: Spring
Prerequisite(s): Prior statistics course
Equivalent Course(s): STAT 36700, STAT 26700, HIPS 25600

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. Fashby Terms Offered: Winter
Equivalent Course(s): PHIL 32000, PHIL 22000, HIST 35109, HIPS 22000, HIST 25109

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): HIPS 20700, LING 20102, PHIL 30000, PHIL 20100

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: Spring
Equivalent Course(s): HIST 23519, MDVL 23519, FNDL 25688, HIST 33519, HIPS 23519

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.
Instructor(s): D. Maestripieri Terms Offered: Autumn
Note(s): Distribution requirements: 1
Equivalent Course(s): HIST 34921, HIST 24921, CHDV 37861, CHDV 27861, KNOW 21418, HIPS 24921, KNOW 31418

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, HIPS 25014, HIST 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, Fraudel, Furet, Hempel, Danto. (B) (III)
Instructor(s): R. Richards Terms Offered: Winter
Equivalent Course(s): KNOW 31401, HIPS 25110, PHIL 30506, HIST 35110, HIST 25110, PHIL 20506

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): PPHA 39921, LACS 25121, LACS 35121, HIPS 25121

CHSS 35309. History of Perception. 100 Units.
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 introduces 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, HIST 25309, ANTH 34308, HIPS 25309, ANTH 24308, 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
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medicine, advertising, and various fields in the sciences. Course materials will include primary sources in those areas, literary materials, and film.

Instructor(s): A. Winter Terms Offered: Winter
Equivalent Course(s): HIST 25408, HIST 35408, HIPS 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): KNOW 35415, KNOW 25415, HIPS 25415, LLSC 23501, HIST 25415, 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 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."

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

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): Anastasia Klimchynskaya, Yan Slobodkin Terms Offered: Winter
Equivalent Course(s): 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 and the corresponding risks-whether imperceptible or probable-are necessarily communicated to publics by media

Instructor(s): Thomas Pringle Terms Offered: Winter
Equivalent Course(s): KNOW 36059, MAAD 26059, CMST 42802, HIPS 26059, SOCI 30329

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 atresia? 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 converge.

Equivalent Course(s): HIPS 26065, SCTR 36065, DIGS 20019, DIGS 30019, SOCI 30331, KNOW 30605

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

Equivalent Course(s): HLTH 27015, ENGL 27015, KNOW 37015, HIPS 27015, KNOW 27015

CHSS 37042. 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): PHIL 33405, PHIL 23405, HIST 35104, HIST 25104, HIPS 25104

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): HLTH 27860, HIPS 27860, CHDV 37860, CHDV 27860, KNOW 27860

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 24905, HIST 34905, PHIL 23015, PHIL 33015, HIPS 24901, FNDL 24905

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
theories, 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
Prerequisite(s): Elementary Logic or equivalent
Equivalent Course(s): HIPS 20905, PHIL 29405, PHIL 39405

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

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 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.
Equivalent Course(s): ENGL 40203, CMLT 40203, KNOW 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.
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
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): Isaiah Lorado Wilner 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 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 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): CRES 40304, KNOW 40304, HIPS 40304, GNSE 40304, HIST 34920

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): KNOW 40305, ENGL 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): KNOW 40306, HIST 37013

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): CMST 47007, KNOW 40307, 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 foretold 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 Gehrber, Jorge Cañizares-Esguerra, and J. Kameron Carter.
Instructor(s): Alex Mazzaferro 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 inequalities, 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, ANTH 40310, CRES 24341, CHDV 24341, HLTH 24341, ANTH 24341, CHDV 30301

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.
Committee on Conceptual and Historical Studies of Science

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.

Instructor(s): F. Albritton Jonsson Terms Offered: Autumn
Prerequisite(s): Upper-level undergraduates with consent of instructor.
Equivalent Course(s): ENGL 43204, HIST 43203

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): CHDV 45100, GNSE 45112, 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 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): KNOW 55100, PHIL 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.
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