History, Philosophy, and Social Studies of Science and Medicine (HIPS)

Program of Study

The BA program in the History, Philosophy, and Social Studies of Science and Medicine (HIPS) is designed for College students interested in studying science in terms of its historical development, conceptual structure, and social role. Students in the program must do sufficient work in one or more sciences to acquire a sound foundation for studying the nature of science. After securing this basis, they are expected to gain an understanding of how science arose, as well as how the content of scientific thought has changed and is changing, because of both its own internal dynamic and its interaction with the larger society in which it is embedded.

The HIPS program is designed to make possible the study of a wide range of social, historical, and conceptual issues relating to science. Students completing the program follow a number of different careers. Some pursue graduate study in the history and philosophy of science or in some field of science. Others find the program valuable preparation for the study of medicine, law, public policy, or science journalism. More generally, the goal of the program is to provide students with a sound basis on which to interpret and evaluate science and science policy. Some students choose to construct a degree program combining the requirements for the HIPS major with those for a major in the physical or biological sciences. Others, having met the HIPS program requirements, use electives to broaden their liberal arts education.

Students in other fields of study may also complete a minor in HIPS. Information follows the description of the major.

HIPS Sponsor

The Morris Fishbein Center for the History of Science and Medicine sponsors the HIPS program. Further information can be obtained in the center's office (SS 207) and at fishbein.uchicago.edu.

Program Requirements

Elements of the Curriculum. The curriculum of the program contains five principal elements:

1. The Foundation. All students must:

   a. complete an approved sequence that fulfills the biological sciences general education requirement;
b. complete the general education requirement in the physical sciences with a physics sequence (PHYS 12100-12200 General Physics I-II or equivalent) or a chemistry sequence (CHEM 11100-11200 Comprehensive General Chemistry I-II, CHEM 10100 Introductory General Chemistry I and CHEM 10200 Introductory General Chemistry II, or equivalent), or have earned a score of 5 on the AP Chemistry or Physics test or a score of 4 or 5 on the AP Physics C Mechanics and E&M test;

c. complete a calculus sequence (MATH 13100-13200 Elementary Functions and Calculus I-II or higher), or have earned a score of 5 on the AP Calculus BC test;

d. complete a three-quarter sequence surveying the growth of science in Western civilization, with three courses from either the HIPS 17300-17400-17501-17502 sequence or the HIPS 17400-17402-17502-17503 sequence.

2. Advanced Science. In addition to the science courses typically taken as part of the general education requirements, students are expected to take three courses in science, social sciences, or mathematics beyond the introductory level. They select these advanced courses according to their special aims, their area of concentration, and the subject of their bachelor's thesis.

3. Areas of Concentration. All students in the program determine an area of concentration in the anthropology, ethics, history, philosophy, or sociology of science and medicine. In consultation with the program director and their program adviser, students select five courses to constitute this concentration area. For example, some students may be particularly interested in the intellectual and social interactions between changing scientific knowledge and institutions, on the one hand, and evolving social institutions, on the other; a second group may be concerned with either epistemological issues related to the growth of science or moral and political problems attending the employment of technology; and a third group may wish to emphasize the study of science as a social or cultural activity.

4. Tutorials. Students are required to take two tutorial courses; this is typically done early in their program. With a specific focus that changes each year, these tutorials are small classes (from three to ten students) that emphasize discussion and writing. An updated list of courses is available in the HIPS office (SS 207) or at my.uchicago.edu.

5. Bachelor's Thesis and Junior Seminar. Third-year students enroll in a designated one-quarter seminar (HIPS 29800 Junior Seminar: My Favorite Readings in the History and Philosophy of Science) that deals with general aspects of history, philosophy, and social studies of science and medicine. In Spring Quarter of their third year, students must discuss their proposal for their bachelor's thesis with the program director. In consultation with the program director, students then sign up for a reading and research course (HIPS 29700 Readings and Research in History, Philosophy, and Social Studies of Science and Medicine) with an appropriate faculty member. In their fourth year, this research course should lead to a bachelor's thesis (HIPS 29900 Bachelor's Thesis) that integrates each
student's academic studies, bringing them to bear on a significant question related to some historical, conceptual, ethical, or social aspect of science. Fourth-year students also enroll in a two-quarter HIPS 29810 Bachelor's Thesis Workshop, which is comprised of meetings that focus on organizing, researching, writing, and revising the thesis.

Summary of Requirements

GENERAL EDUCATION

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<th>Three courses from one of the following sequences:</th>
<th>300</th>
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<tr>
<td>HIPS 17300 Science, Culture, and Society in Western Civilization I</td>
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<td>HIPS 17400 Science, Culture, and Society in Western Civilization II</td>
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<td>HIPS 17501 Science, Culture, and Society in Western Civilization III: Medicine since the Renaissance</td>
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<td>or HIPS 17502 Science, Culture, and Society in Western Civilization IV: Modern Science</td>
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<td>or</td>
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<tr>
<td>HIPS 17400 Science, Culture, and Society in Western Civilization II</td>
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<tr>
<td>HIPS 17402 Science, Culture, and Society in Western Civilization II: History of Medicine 1</td>
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<tr>
<td>HIPS 17503 Science, Culture, and Society in Western Civilization III: History of Medicine 2</td>
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<tr>
<td>or HIPS 17502 Science, Culture, and Society in Western Civilization IV: Modern Science</td>
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<tr>
<td>An approved sequence that fulfills the biological sciences general education requirement</td>
<td>200</td>
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One of the following sequences: 200

| CHEM 10100 & CHEM 10200 Introductory General Chemistry I and Introductory General Chemistry II (or equivalent) * |
|-------------------------|-------------------------------------------------|
| CHEM 11100-11200 Comprehensive General Chemistry I-II (or equivalent) * |
| PHYS 12100-12200 General Physics I-II (or higher) * |
| MATH 13100-13200 Elementary Functions and Calculus I-II (or higher) * |

Total Units 900

MAJOR

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<th>Three courses in science, social sciences, or mathematics beyond the introductory level</th>
<th>300</th>
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<tr>
<td>Five courses in an area of concentration</td>
<td>500</td>
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<td>Two tutorials</td>
<td>200</td>
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<tr>
<td>HIPS 29700 Readings and Research in History, Philosophy, and Social Studies of Science and Medicine</td>
<td>100</td>
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History, Philosophy, and Social Studies of Science and Medicine (HIPS)

HIPS 29800  Junior Seminar: My Favorite Readings in the History and Philosophy of Science  100
HIPS 29900  Bachelor's Thesis  100
HIPS 29810  Bachelor's Thesis Workshop  100
Total Units  1400

* Credit may be granted by examination.

Examples of Concentrations

The following are meant to illustrate areas of concentration. They are not prescriptive, only suggestive. For the particular courses that might constitute their area of concentration, students should consult with the director of the program, examine this course catalog, and visit my.uchicago.edu.

**History and Philosophy of Biological Science**

HIPS 22700  Philosophical Problems in the Biological Sciences  100
HIPS 23600  History and Theory of Human Evolution  100
HIPS 23900  Biological and Cultural Evolution  100
HIPS 25801  Evolutionary Theory and Its Role in the Human Sciences  100
HIPS 28202  Topics in Philosophy of Science: Mechanism and Causation  100

**Philosophy of Science**

HIPS 20300  Scientific/Technological Change  100
HIPS 22000  Introduction to the Philosophy of Science  100
HIPS 22300  Philosophy of Social Science  100
HIPS 24900  Natural Philosophy 1200–1800  100
HIPS 25400  Philosophy of Mind and Science Fiction  100

**History of Medicine and Medical Ethics**

HIPS 14900  History of Medicine since the Renaissance  100
HIPS 21400  Intro to Medical Ethics  100
HIPS 21600  Advanced Medical Ethics: Health Care  100
HIPS 25900  Darwinian Medicine  100
HIPS 27300  Medicine and Culture  100

Admission

To be eligible for admission, students should have completed at least two of the four foundation course sequences listed in the preceding section and should have maintained a 3.2 GPA or higher in previous course work. Students should apply for admission no later than Autumn Quarter of their third year to the director of the program. The director...
advises students about the requirements, arranges a preliminary plan of study, and discusses scheduling conflicts and special cases. Thereafter, a student chooses, in consultation with the director, a BA adviser from the staff.

Honors

Students who meet the following criteria are considered for graduation with honors: (1) overall GPA of 3.3 or higher, (2) completion of a bachelor's thesis of A quality, and (3) a majority vote by the faculty in favor of honors.

Grading

Students majoring in HIPS must receive quality grades in all courses meeting the requirements of the degree program, except HIPS 29810 Bachelor's Thesis Workshop must be taken for P/F grading. Nonmajors may take courses for P/F grading with consent of instructor.

Advisers

Drawn from many parts of the University, those listed in the Faculty Section of the HIPS program have direct responsibility for admitting students, formulating curriculum, and advising students.

Minor Program in History, Philosophy, and Social Studies of Science and Medicine

Students in other fields of study may complete a minor in HIPS, in particular, the minor program in HIPS offers students who are majoring in science the opportunity to gain an understanding of the conceptual, historical, and social contexts in which their disciplines are situated.

The minor requires a total of six courses. Courses in the minor (1) may not be double counted with the student's major(s) or with other minors and (2) may not be counted toward general education requirements. Courses in the minor must be taken for quality grades, and more than half of the requirements for the minor must be met by registering for courses bearing University of Chicago course numbers.

Students should take at least two courses from either the sequence HIPS 17300-HIPS 17400-HIPS 17501-HIPS 17502 Science, Culture, and Society in Western Civilization I-II-III-IV or from the sequence HIPS 17400-HIPS 17402-HIPS 17503-HIPS 17502 Science, Culture, and Society in Western Civilization II-II-III-IV to meet the general education requirement in civilization studies. Additional courses in these sequences that are not used to meet the general education requirement can count toward courses required for the minor.

Students must complete one tutorial course.
The remaining five courses for the minor program should constitute an area of concentration in the anthropology, ethics, history, philosophy, or sociology of science and medicine. Students select the courses that constitute this concentration in consultation with the program director and their program adviser.

Students who elect the minor program in HIPS should meet with the program director before the end of Spring Quarter of their third year to declare their intention to complete the program. The director's approval for the minor program should be submitted to the student's College adviser by the deadline above on a form obtained from the adviser.

The following groups of courses would satisfy the requirements for a minor in HIPS. They are only meant to illustrate possible plans of study; they are not prescriptive.

**Group 1**

**Tutorial:**

| HIPS 29405 | Tutorial: Evolution and Pragmatism |

**Concentration in History and Philosophy of Biology:**

| HIPS 22700 | Philosophical Problems in the Biological Sciences |
| HIPS 23600 | History and Theory of Human Evolution |
| HIPS 23900 | Biological and Cultural Evolution |
| HIPS 25801 | Evolutionary Theory and Its Role in the Human Sciences |
| HIPS 28202 | Topics in Philosophy of Science: Mechanism and Causation |

**Group 2**

**Tutorial:**

| HIPS 29606 | Tutorial: Medicine, Disease, and Death in American History |

**Concentration in History of Medicine and Medical Ethics:**

| HIPS 17501 | Science, Culture, and Society in Western Civilization III: Medicine since the Renaissance (if not taken to meet general education requirements) |
| HIPS 21400 | Intro to Medical Ethics |
| HIPS 21600 | Advanced Medical Ethics: Health Care |
| HIPS 24800 | Gender and History and Science Technology and Medicine |
| HIPS 27300 | Medicine and Culture |
Hist/Philos & Social Studies of Sci/Med Courses

**HIPS 15002. Whales and Whaling in American History. 100 Units.**
This course examines American intellectual, social, and cultural history through one of its most tremendous and least understood foils: whales. Since early in the history of European colonial incursions in North America, whales—along with smaller cetaceans such as dolphins and porpoises—have figured in American culture variously as natural resources to be exploited, sentient beings to be protected, and, more broadly, as the bases for ruminations on aesthetics and grandeur, self and other, economics and social organization, and science and power. From our vantage point between two of America’s earliest and most prosperous of whaling communities, New Bedford and Nantucket, this course will think through the conjoined histories of whales and (North American) humans, from the early days of whaling in the nascent United States through the rise of America’s industrial power and the decline of its whaling industry to its emergence as a leader in whale conservation and cetological science.

Instructor(s): M. Rossi Terms Offered: Autumn
Prerequisite(s): Second-year students and beyond preferred. Good academic standing. Application and acceptance into the quarter-long program at the Marine Biological Laboratory in Woods Hole.
Equivalent Course(s): HIST 15002

**HIPS 17300-17400-17501-17502-17503. Science, Culture, and Society in Western Civilization I-II-II-III-IV-III.**
This group of courses consists of two three-quarter sequences: HIPS 17300-17400-17501 or 17502, and HIPS 17400-17402-17503 or 17502. Taking these courses in sequence is recommended but not required. Each sequence meets the general education requirement in civilization studies. Each three-quarter sequence focuses on the origins and development of science in the West. Our aim is to trace the evolution of the biological, psychological, natural, and mathematical sciences as they emerge from the cultural and social matrix of their periods and, in turn, affect culture and society.

**HIPS 17300. Science, Culture, and Society in Western Civilization I. 100 Units.**
The first quarter examines the sources of Greek science in the diverse modes of ancient thought and its advance through the first centuries of our era. We look at the technical refinement of science, its connections to political and philosophical movements of fifth- and fourth-century Athens, and its growth in Alexandria.
Instructor(s): J. Wee Terms Offered: Autumn
Equivalent Course(s): HIST 17300

**HIPS 17400. Science, Culture, and Society in Western Civilization II. 100 Units.**
The second quarter is concerned with the period of the scientific revolution: the sixteenth to eighteenth centuries. The principal subjects are the work of Copernicus, Kepler, Galileo, Vesalius, Harvey, Descartes, and Newton.
Instructor(s): R. Richards Terms Offered: Winter
Equivalent Course(s): HIST 17400
HIPS 17402. Science, Culture, and Society in Western Civilization II: History of Medicine 1. 100 Units.
This course examines the history of medicine from the Renaissance through the end of the eighteenth century, when many features of medicine that we now consider "modern" were coming into being. Topics include the history of anatomy and physiology, including Vesalius and Harvey; the history of relations between doctors and patients, including traditional medical practitioners and midwives; and the changing nature of the hospital.
Terms Offered: Not offered in 2016–17
Equivalent Course(s): HIST 17402

HIPS 17501. Science, Culture, and Society in Western Civilization III: Medicine since the Renaissance. 100 Units.
This course is an examination of various themes in the history of medicine in Western Europe and America since the Renaissance. Topics include key developments of medical theory (e.g., the circulation of the blood and germ theory), relations between doctors and patients, rivalries between different kinds of healers and therapists, and the development of the hospital and laboratory medicine.
Terms Offered: Not offered 2016-17
Equivalent Course(s): HIST 17501

HIPS 17502. Science, Culture, and Society in Western Civilization IV: Modern Science. 100 Units.
The advances science has produced have transformed life beyond anything that a person living in 1833 (when the term "scientist" was first coined) could have anticipated. Yet science continues to pose questions that are challenging and, in some instances, troubling. How will our technologies affect the environment? Should we prevent the cloning of humans? Can we devise a politically acceptable framework for the patenting of life? Such questions make it vitally important that we try to understand what science is and how it works, even if we never enter labs. This course uses evidence from controversies (e.g., Human Genome Project, International Space Station) to throw light on the enterprise of science itself.
Instructor(s): J. Evans Terms Offered: Spring
Equivalent Course(s): HIST 17502

HIPS 17503. Science, Culture, and Society in Western Civilization III: History of Medicine 2. 100 Units.
No description available.
Terms Offered: Not offered in 2016-17
Equivalent Course(s): HIST 17503
HIPS 20003. Discovering Anthropology: Reading Race. 100 Units.
Before and since Anthropology became a discrete scientific field of study, questions about
the biological reality, potential utility and misuse of the concept of race in Homo sapiens
have been debated. We will read and discuss a sample of writings by 18th, 19th, and 20th
century and contemporary authors who attempted to define human races and those who have
promoted or debunked the utility of the concept of race with special attention to it role in
retarding social progress, and the extermination and exploitation of some populations and
individuals.
Instructor(s): R. Tuttle Terms Offered: Winter (Tentative)
Equivalent Course(s): CRES 20003, ANTH 38305, ANTH 20003

HIPS 20300. Scientific/Technological Change. 100 Units.
No description available.
Equivalent Course(s): CHSS 42300

HIPS 20500. Intermediate Logic. 100 Units.
In this course, we will prove the soundness and completeness of deductive systems for
both sentential and first-order logic. We will also establish related results in elementary
model theory, such as the compactness theorem for first-order logic, the Lowenheim-Skolem
theorem and Lindstrom’s theorem. (II) (B)
Instructor(s): A. Vasudevan Terms Offered: Winter
Note(s): Undergrads enroll in sections 01 & 02. Graduates enroll in section 03.
Equivalent Course(s): CHSS 33600, PHIL 39600, PHIL 29400

HIPS 20700. Elementary Logic. 100 Units.
An introduction to the techniques of modern logic. These include the representation of
arguments in symbolic notation, and the systematic manipulation of these representations in
order to show the validity of arguments. Regular homework assignments, in class test, and
final examination.
Instructor(s): M. Kremer Terms Offered: Autumn
Prerequisite(s): No prerequisites. Course not for field credit.
Note(s): Undergrads enroll in sections 01 through 08. Graduates enroll in section 09.
Equivalent Course(s): CHSS 33500, PHIL 30000, PHIL 20100

HIPS 20800. Evolutionary Processes. 100 Units.
No description available.
Terms Offered: Autumn
Prerequisite(s): Consent of instructor
Note(s): This course does not meet requirements for the biological sciences major.
HIPS 20905. 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. (II) and (B)
Instructor(s): K. Davey Terms Offered: Autumn
Prerequisite(s): Intermediate logic or prior equivalent required.
Equivalent Course(s): CHSS 39405, PHIL 39405, PHIL 29405

HIPS 21000. Introduction to Ethics. 100 Units.
In this course, we will read, write, and think about central issues in moral philosophy. This survey course is designed to give a rapid introduction to philosophical ethics (largely in the Anglo–North American tradition (although not entirely as a product of Anglo–North American philosophers). We will begin with work by Immanuel Kant and Henry Sidgwick and conclude with important twentieth-century work in metaethics and normative ethics (one thing that we will consider is the distinctions between metaethics, normative ethics, and the various fields united under the rubric 'applied ethics'). This course is intended as an introductory course in moral philosophy. Some prior work in philosophy is helpful, but not required. (A)
Instructor(s): C. Vogler Terms Offered: Winter
Note(s): Students should register via discussion section.
Equivalent Course(s): FNDL 23107, PHIL 21000

HIPS 21100. Celebrity and Science in Paleoanthropology. 100 Units.
This seminar explores the balance among research, “showbiz” big business, and politics in the careers of Louis, Mary, and Richard Leakey; Alan Walker; Donald Johanson; Jane Goodall; Dian Fossey; and Biruté Galdikas. Information is gathered from films, taped interviews, autobiographies, biographies, pop publications, instructor's anecdotes, and samples of scientific writings.
Instructor(s): R. Tuttle Terms Offered: Winter. Tentative
Equivalent Course(s): ANTH 38300, ANTH 21406

HIPS 21200. Big Science and the Birth of the National Security State. 100 Units.
This course examines the mutual creation of big science and the American national security state during the Manhattan Project. It presents the atomic bomb project as the center of a new orchestration of scientific, industrial, military, and political institutions in everyday American life. Exploring the linkages between military technoscience, nation-building, and concepts of security and international order, we interrogate one of the foundation structures of the modern world system.
Instructor(s): J. Masco Terms Offered: TBD
Equivalent Course(s): ANTH 34900, ANTH 22400
HIPS 21301. The Anthropology of Science. 100 Units.
Reading key works in the philosophy of science, as well as ethnographic studies of scientific practices and objects, this course introduces contemporary science studies. We interrogate how technoscientific "facts" are produced, discussing the transformations in social order produced by new scientific knowledge. Possible topics include the human genome project, biodiversity, and the digital revolution.
Instructor(s): J. Masco Terms Offered: TBD
Equivalent Course(s): ANTH 32300, ANTH 22105

HIPS 21400. Intro to Medical Ethics. 100 Units.
No description available.
Terms Offered: Not offered in 2016-17

HIPS 22000. Introduction to the 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)
Instructor(s): K. Davey Terms Offered: Autumn

HIPS 22300. Philosophy of Social Science. 100 Units.
No description available.
Instructor(s): W. Wimsatt Terms Offered: Winter
Equivalent Course(s): CHSS 37700, PHIL 32900, PHIL 22900

HIPS 22700. Philosophical Problems in the Biological Sciences. 100 Units.
No description available.
Terms Offered: Not offered in 2016-17

HIPS 23000. The Organization of Knowledge. 100 Units.
This course explores several structures of knowledge that students may have encountered in their core and specialized education, with the goal of enabling students to identify and explore the implications of these different structures. We ask whether all knowledge is relative, and if so, to what? When things are structured differently, does that mean that knowledge is lost? Or are there several diverse ways of structuring knowledge, each of which may be viable? We read a wide range of classical and modern thinkers in various disciplines.
Instructor(s): W. Sterner Terms Offered: Spring
Prerequisite(s): Third- or fourth-year standing

HIPS 23600. History and Theory of Human Evolution. 100 Units.
This course is a seminar on racial, sexual, and class bias in the classic theoretic writings, autobiographies, and biographies of Darwin, Huxley, Haeckel, Keith, Osborn, Jones, Gregory, Morton, Broom, Black, Dart, Weidenreich, Robinson, Leakey, LeGros-Clark, Schultz, Straus, Hooton, Washburn, Coon, Dobzhansky, Simpson, and Gould.
Instructor(s): R. Tuttle Terms Offered: TBD
Equivalent Course(s): ANTH 38400, EVOL 38400, ANTH 21102
HIPS 23700. Apes and Human Evolution. 100 Units.
No description available.
Instructor(s): R. Tuttle Terms Offered: Spring
Note(s): BIOS 23241 recommended.

HIPS 23900. Biological and Cultural Evolution. 100 Units.
No description available.
Instructor(s): W. Wimsatt, S. Mufwene Terms Offered: Winter
Prerequisite(s): Third- or fourth-year standing, or consent of instructor required; core background in genetics and evolution recommended
Note(s): This course does not meet requirements for the biological sciences major.

HIPS 24000. Evolution of the Hominoida. 200 Units.
This course is a detailed consideration of the fossil record and the phylogeny of Hominidae and collateral taxa of the Hominidea that is based upon studies of casts and comparative primate osteology.
Instructor(s): R. Tuttle Terms Offered: TBD
Prerequisite(s): Third- or fourth-year standing and consent of instructor
Equivalent Course(s): ANTH 38100,EVOL 38100,ANTH 28100

HIPS 24300. Foucault and The History of Sexuality. 100 Units.
This course centers on a close reading of the first volume of Michel Foucault’s *The History of Sexuality*, with some attention to his writings on the history of ancient conceptualizations of sex. How should a history of sexuality take into account scientific theories, social relations of power, and different experiences of the self? We discuss the contrasting descriptions and conceptions of sexual behavior before and after the emergence of a science of sexuality. Other writers influenced by and critical of Foucault are also discussed.
Instructor(s): A. Davidson Terms Offered: Autumn
Note(s): One prior philosophy course is strongly recommended. Students should register via discussion section.
Equivalent Course(s): CMLT 25001,FNDL 22001,GNSE 23100,KNOW 27002,PHIL 24800

HIPS 25001. Kant's "Critique of Pure Reason" 100 Units.
This will be a careful reading of what is widely regarded as the greatest work of modern philosophy, Immanuel Kant’s *Critique of Pure Reason*. Our principal aims will be to understand the problems Kant seeks to address and the significance of his famous doctrine of "transcendental idealism". Topics will include: the role of mind in the constitution of experience; the nature of space and time; the relation between self-knowledge and knowledge of objects; how causal claims can be justified by experience; whether free will is possible; the relation between appearance and reality; the possibility of metaphysics. (B) (V)
Instructor(s): M. Boyle Terms Offered: Spring
Note(s): Undergrads enroll in sections 01, 02, 03 & 04. Graduates enroll in section 05.
Equivalent Course(s): FNDL 27800,CHSS 37901,PHIL 37500,PHIL 27500
HIPS 25014. 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, et al. 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, CHSS 35014, HIST 25014

HIPS 25205. Computers, Minds, Intelligence & Data. 100 Units.
How are we co-evolving with our machines? How do we teach ourselves and our computers how to learn? What kinds of human intelligences do we promote in liberal education in comparison with artificial intelligence(s)? Through our distributed cognition with tools of all kinds, as we engage in participatory culture using digital computers and networks, we provide information that generates the basis for big (and small) data. At the crux of our investigation—on the one hand into reading and conversation and on the other hand into algorithms and information theory—are issues about human action and the multifaceted agency of the universal Turing machine—as mobile phone, laptop, internet, robot.
Instructor(s): M. Browning Terms Offered: Autumn
Equivalent Course(s): HUMA 25205

HIPS 25506. Science and Aesthetics in the Eighteenth to the Twenty-First Centuries. 100 Units.
One can distinguish four ways in which science and aesthetics are related during the period since the Renaissance. First, science has been the subject of artistic representation, in painting and photography, in poetry and novels (e.g., in Byron’s poetry, for example). Second, science has been used to explain aesthetic effects (e.g., Helmholtz’s work on the way painters achieve visual effects or musicians achieve tonal effects). Third, aesthetic means have been used to convey scientific conceptions (e.g., through illustrations in scientific volumes or through aesthetically affective and effective writing). Finally, philosophers have stepped back to consider the relationship between scientific knowing and aesthetic comprehension (e.g., Kant, Bas van Fraassen); much of the discussion of this latter will focus on the relation between images and what they represent. In this lecture-discussion course we will consider all of these aspects of the science-aesthetic connection.
Instructor(s): R. Richards Terms Offered: Spring
Equivalent Course(s): CHSS 35506, HIST 35506, PHIL 24301, PHIL 34301, SIGN 26003, HIST 25506
HIPS 25600. 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 26700, CHSS 32900, STAT 36700

HIPS 25901. Evolution of Mind and Morality: Nineteenth to Twenty-First Centuries. 100 Units.
No description available.
Instructor(s): R. Richards Terms Offered: Autumn
Prerequisite(s): Third- or fourth-year standing
Equivalent Course(s): CHSS 35900, HIST 25501, HIST 35501, PHIL 24300, PHIL 34300, PSYC 28200

HIPS 25902. A History of Cell and Molecular Biology. 100 Units.
This course will trace the parallel histories of cell and molecular biology, primarily in the 20th century, by exploring continuities and discontinuities between these fields and their precursors. Through discussion, attempts will be made to develop definitions of cell and molecular biology that are based upon their practices and explanatory strategies, and to determine to what extent these practices and strategies overlap. Finally, the relevance of these definitions to current developments in biology will be explored. The course is not designed to be comprehensive, but will provide an overall historical and conceptual framework.
Instructor(s): K. Matlin Terms Offered: Spring
Prerequisite(s): This course does not meet the requirements for the Biological Sciences Major.
Equivalent Course(s): BIOS 29270

HIPS 26000. History of Philosophy II: Medieval and Early Modern Philosophy. 100 Units.
A survey of the thought of some of the most important figures of this period, including Anselm, Aquinas, Descartes, Hobbes, Spinoza, Leibniz, Locke, Berkeley, and Hume. (V)
Instructor(s): B. Callard Terms Offered: Winter
Prerequisite(s): Completion of the general education requirement in humanities required; PHIL 25000 recommended.
Note(s): Students should register via discussion section.
Equivalent Course(s): PHIL 26000

Full title: "Nature, Science, and Empire in the Early Modern Iberian World, 1400–1800." Historians have often relegated Iberia and its New World domains from accounts of the developments of modern science. They have traditionally claimed that strict censorship and a commitment to orthodox Catholicism prevented Spain, once the most powerful empire of the world, from embarking on the path towards scientific modernity in the eighteenth century. Modern scholars, however, have challenged this narrative by embracing more inclusive concepts of "science" to explain the many ways in which early modern people related to nature. Some of these practices include the writing of natural histories, botanical research, and linguistic studies, all fields that Iberian scholars pioneered in their efforts to govern their vast domains. This course will introduce students to a diversity of scientific practices that flourished in the Hispanic world between 1400 and 1800.

Instructor(s): V. López Fadul Terms Offered: Spring
Equivalent Course(s): LACS 26121,HIST 26121

HIPS 26203. Nature/Culture. 100 Units.

Exploring the critical intersection between science studies and political ecology, this course interrogates the contemporary politics of "nature." Focusing on recent ethnographies that complicated our understandings of the environment, the seminar examines how conceptual boundaries (e.g., nature, science, culture, global/local) are established or transgressed within specific ecological orders).

Instructor(s): J. Masco Terms Offered: Winter (Tentative)
Equivalent Course(s): ANTH 43805,CHSS 32805,ANTH 23805

HIPS 26502. Social Studies of Science. 100 Units.

No description available.

Instructor(s): J. Evans Terms Offered: Spring
Equivalent Course(s): SOCI 20148,SOCI 30148,CHSS 30310

HIPS 27300. Medicine and Culture. 100 Units.

This course examines diverse systems of thought and practice concerning health, illness, and the management of the body and person in everyday and ritual contexts. We seek to develop a framework for studying the cultural and historical constitution of healing practices, especially the evolution of Western biomedicine.

Instructor(s): J. Comaroff Terms Offered: Spring
Equivalent Course(s): ANTH 40300,GNDR 24300,GNDR 40300,RLST 27500,ANTH 24300
HIPS 27301. Medical Anthropology. 100 Units.
This course introduces students to the central concepts and methods of medical anthropology. Drawing on a number of classic and contemporary texts, we will consider both the specificity of local medical cultures and the processes which increasingly link these systems of knowledge and practice. We will study the social and political economic shaping of illness and suffering and will examine medical and healing systems—including biomedicine—as social institutions and as sources of epistemological authority. Topics covered will include the problem of belief; local theories of disease causation and healing efficacy; the placebo effect and contextual healing; theories of embodiment; medicalization; structural violence; and the distribution of risk; the meanings and effects of new medical technologies; and global health.
Instructor(s): E. Raikhel Terms Offered: Winter
Prerequisite(s): Social Sciences general education sequence
Note(s): CHDV Distribution, C*,D*
Equivalent Course(s): ANTH 24330, CHDV 23204

HIPS 28101. Psychoanalysis and Philosophy. 100 Units.
An introduction to psychoanalytic thinking and its philosophical significance. A question that will concern us throughout the course is: What do we need to know about the workings of the human psyche—in particular, the Freudian unconscious—to understand what it would be for a human to live well? Readings from Plato, Aristotle, Freud, Bion, Betty Joseph, Paul Gray, Lacan, Lear, Loewald, Edna O’Shaughnessy, and others.
Instructor(s): J. Lear Terms Offered: Autumn
Prerequisite(s): Course for Graduate Students and Upper Level Undergraduates. Student must have completed at least one 30000 level Philosophy course.
Equivalent Course(s): PHIL 38209, SCTH 37501, PHIL 28210

HIPS 28202. Topics in Philosophy of Science: Mechanism and Causation. 100 Units.
No description available.
Instructor(s): B. Fogel Terms Offered: Spring
Note(s): Background in science not required.
Equivalent Course(s): PHIL 21109, PHIL 31109

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

HIPS 28601. Environment and the Body. 100 Units.
No description available.
Instructor(s): A. Gugliotta Terms Offered: Winter
HIPS 28801. Environmental Law. 100 Units.
No description available.
Terms Offered: Autumn
Prerequisite(s): Third- or fourth-year standing, or consent of instructor

HIPS 29623. Scientists & the Political Sphere in Six Germanys 1871-Present. 100 Units.
This course will examine the odd-couple relationship between science, scientists, politicians, and the political sphere, using the tumultuous political history of Germany from 1871 to the present as its backdrop. With a slight emphasis on the natural sciences—but broadening out our view when necessary—we will examine how German scientists chose to interact with six (or seven, depending on how you count) Germanys—the German Empire (1871-1918), the Weimar Republic (1919-1933), the Third Reich (1933-1945), occupied Germany (1945-1949), West and East Germany (1949-1990), and the reunited Germany of today (1990-present). How did these scientists build relationships with the various governments? What were their reactions to the various forms of government (i.e. democracy vs. fascist dictatorship vs. ‘real existing socialism’)? How did emerging concepts of ethics in science play into scientists’ relations with the political sphere? Why the constant claims of science as ‘apolitical’?

Instructor(s): R. Dahn Terms Offered: Spring
Equivalent Course(s): HIST 25414

HIPS 29700. Readings and Research in History, Philosophy, and Social Studies of Science and Medicine. 100 Units.
No description available.
Terms Offered: Autumn, Winter, Spring
Note(s): Students are required to submit the College Reading and Research Course Form.

HIPS 29800. Junior Seminar: My Favorite Readings in the History and Philosophy of Science. 100 Units.
This course introduces some of the most important and influential accounts of science to have been produced in modern times. It provides an opportunity to discover how philosophers, historians, anthropologists, and sociologists have grappled with the scientific enterprise, and to assess critically how successful their efforts have been. Authors likely include Karl Popper, Thomas Kuhn, Robert Merton, Steven Shapin, and Bruno Latour.
Instructor(s): R. Richards Terms Offered: Winter
Equivalent Course(s): HIST 25503

HIPS 29810. Bachelor’s Thesis Workshop. 100 Units.
Terms Offered: Autumn, Winter, Spring
HIPS 29900. Bachelor's Thesis. 100 Units.
This is a research course for independent study related to thesis preparation.
Terms Offered: Autumn, Winter, Spring
Note(s): Students are required to submit the College Reading and Research Course Form.
Font Notice

This document should contain certain fonts with restrictive licenses. For this draft, substitutions were made using less legally restrictive fonts. Specifically:

Times was used instead of Trajan.

Times was used instead of Palatino.

The editor may contact Leepfrog for a draft with the correct fonts in place.