

# HSCI-HISTORY OF SCIENCE

## **HSCI 1113 Science, Nature and Society: Historical Perspectives 3 Credit Hours**

An introduction to the study of science, technology, and medicine in light of historical, philosophical, and cultural analysis. Focusing on the relationships between science, nature, and society, this class introduces some of the big questions about who we are, who we have been, and who we might become. (Irreg.) [IV-WC].

## **HSCI 2133 Science and Popular Culture 3 Credit Hours**

Draws on interdisciplinary perspectives to examine the interplay between science and popular culture from the Scientific Revolution to the present. Topics include representations of science, scientists, and nature in popular literature, television, films, and documentaries; the development of zoos and science museums; children and science, and science journalism. (Sp) [IV-WC].

## **HSCI 2213 The Darwinian Revolution 3 Credit Hours**

The "Darwinian Revolution" was a revolution in culture as well as biology. We consider the history of the social, political, and theological issues associated with the development of evolutionary thought from the early nineteenth century to the present. (Irreg.) [IV-WC].

## **HSCI 2223 Lives in Science: History of Science through Biography 3 Credit Hours**

Prerequisite: junior standing, or completion of one History of Science lower-division course, or permission of instructor. Explores the history of science, medicine, and technology from a more personal perspective, looking at the lives of scientists, engineers, and physicians, both real and fictional. Course materials include novels and films as well as biographies. (Irreg.) [IV-WC].

## **HSCI 2423 Social and Ethical Issues in Science, Technology, Environment and Medicine 3 Credit Hours**

An introduction to a range of social and ethical issues in the history of science, technology, environment and medicine. Including the social, political and ethical implications of technology and scientific knowledge, and the role they play in shaping our environment and our selves. (Irreg.) [IV-WC].

## **HSCI 2970 Special Topics/Seminar 1-3 Credit Hours**

Special Topics. 1 to 3 hours. May be repeated; Maximum credit nine hours. Special topics course for content not currently offered in regularly scheduled courses. May include library and/or laboratory research, and field projects. (Irreg.)

## **HSCI 3013 History of Science to the Age of Newton 3 Credit Hours**

Prerequisite: junior standing, or completion of one History of Science lower-division course, or permission of instructor. A survey of Western people's efforts to understand the natural world, from earliest historical times to the seventeenth century. (F, Sp, Su) [IV-WC].

## **HSCI 3023 History of Science Since the Seventeenth Century 3 Credit Hours**

Prerequisite: junior standing, or completion of one History of Science lower-division course, or permission of instructor. A survey of the historical and intellectual development of modern science. (F, Sp, Su) [IV-WC].

## **HSCI 3223 Gender Issues in Science, Technology and Medicine 3 Credit Hours**

Prerequisite: junior standing, or completion of one History of Science lower-division course, or permission of instructor. Historical analysis of gender issues in science, technology and medicine, and in comparison with current practices. Topics will include questions in scientific method, particularly the concept of "objectivity," bio-social theories of gender; gender issues in scientific inquiry, in the development of and engagement with technologies, and in medical thought and practice; media images; and feminist science fiction. (Irreg.) [IV-WC].

## **HSCI 3243 Women and Medicine 3 Credit Hours**

Prerequisite: junior standing, or completion of one History of Science lower-division course, or permission of instructor. Surveys the relationship between women and medicine in the modern period (roughly between 1750 and the present). Examines the interrelated histories of women as medical practitioners, patients and objects of medical knowledge. Also includes discussion on how women experienced illness in the past and the expectations and norms that shaped their illness experiences. Finally, a look at medical knowledge about women and how ideas about gender have been constructed by the medical professions. (Sp) [IV-WC].

## **HSCI 3253 Race and Science 3 Credit Hours**

Prerequisite: junior standing or completion of one History of Science course or permission of instructor. Examines the rise and fall of scientific conceptions of race from 1800 to the present, paying particular attention to its connections to 19th Century evolutionary theory, eugenics, the modern evolutionary synthesis, and recent genetics and genomics. Also looks at the role of cultural values associated with race in science more broadly. Course materials include films and novels as well as nonfiction. (F, Sp) [IV-WC].

## **HSCI 3263 History of Public Health 3 Credit Hours**

(Crosslisted with HIST 3263) Prerequisite: Junior Standing or a lower division HSCI course or HIST 1733 or HIST 2723 or Permission of Instructor. Taking an historical perspective students explore and analyze the social, economic, political and scientific events and processes that have shaped modern public health. (F) [IV-WC].

## **HSCI 3273 Of Acupuncture, Medicine Men & Ayurveda: Indigenous & Non-Western Medicine in Perspective 3 Credit Hours**

(Crosslisted with HIST 3273) Prerequisite: Junior Standing or a lower division HSCI course or HIST 1733 or HIST 2723 or Permission of Instructor. Introduces histories of practices and systems of medicine and healing that are variously deemed 'indigenous,' 'non-western,' 'alternative' and 'complementary' in historical context. Students critique the historical and cultural meaning of these terms, as well as their attendant conceptions of health, disease and the body. (F) [IV-NW].

## **HSCI 3283 Introduction to Disability Studies 3 Credit Hours**

Prerequisite: junior standing or permission of instructor or completion of one lower-division History of Science course. Students engage text, audio and video sources to examine the social and cultural experience of disability in different times and cultures to critically assess how culture (mis)represents disability and corporeal difference. (F)[IV-WC].

**HSCI 3313 Science and Technology in Asian History 3 Credit Hours**

Prerequisite: junior standing, or completion of one History of Science lower-division course, or permission of instructor. Examines science and technology in east, south, and southeast Asia from 1000 A.D. to the present. We examine the influence and interaction of knowledge traditions (especially Chinese, south Asian and Islamic), how they circulate around and beyond Asia, and interactions with European knowledge traditions, culminating in examinations of political and ethical dimensions of science and technology in contemporary Asia. (Irreg.) [IV-NW].

**HSCI 3333 Technology and Society in World History 3 Credit Hours**

Prerequisite: junior standing, or completion of one History of Science lower-division course, or permission of instructor. A survey of the history of technology since 1500. Emphasizes historical contexts and cultural meanings, not technical details, as it explores the key steps in the construction of our modern technological world. Materials include literature and film as well as non-fiction. (Sp) [IV-WC].

**HSCI 3353 Science and Empire 3 Credit Hours**

Prerequisite: junior standing or one previous HSCI course or permission of instructor. Examines the contested history of science and empire from both western and non-western perspectives, learning about colonial and post-colonial encounters in science, both imagined and lived. Materials include travelers' tales, explorers' accounts, fiction, and films as well as nonfiction. (Sp) [IV-WC].

**HSCI 3413 Biomedical Ethics 3 Credit Hours**

Prerequisite: Junior standing, or completion of one History of Science lower-division course, or permission of instructor. Introduces key concepts in biomedical ethics. Topics may include: the doctor/patient relationship; medical research on humans and animals; reproductive rights and technologies; medical decisions at the end of life; and the allocation of scarce resources. (Irreg.) [IV-WC].

**HSCI 3423 Modern Medicine - A Historical Introduction 3 Credit Hours**

Prerequisite: junior standing, or completion of one History of Science lower-division course, or permission of instructor. Examines the history of modern medicine in Europe and America. Aims to connect medical ideas and practices to the broader social and cultural contexts in which they were developed. (Irreg.) [IV-WC].

**HSCI 3440 Mentored Research Experience 3 Credit Hours**

0 to 3 hours. Prerequisites: ENGL 1113 or equivalent, and permission of instructor. May be repeated; maximum credit 12 hours. For the inquisitive student to apply the scholarly processes of the discipline to a research or creative project under the mentorship of a faculty member. Student and instructor should complete an Undergraduate Research & Creative Projects (URCP) Mentoring Agreement and file it with the URCP office. Not for honors credit. (F, Sp, Su)

**HSCI 3443 Science in a Religious World 3 Credit Hours**

Prerequisite: junior standing, or completion of one History of Science lower-division course, or permission of instructor. An overview of major events in the intersection of science and religion from the Middle Ages to the present. A detailed look at the historical record and exploration of the background of the people involved, the social and political context, and the reasons why certain issues mattered so much. (Sp) [IV-WC].

**HSCI 3453 Science and Civilization in Islam 3 Credit Hours**

Prerequisite: junior standing or permission. History of scientific traditions and ideas in Islamic civilization, from the origins of Islam to the early modern period. Emphasis is on the derivation, development and transmission of Islamic science, as well as on the assimilation and influence of science within Islamic culture. (Sp) [IV-NW].

**HSCI 3463 Cold War Science 3 Credit Hours**

Prerequisite: junior standing or permission. Science and technology during the Cold War, including strategic weapons and SDI, medical experiments, the space race, science in popular culture, and science and foreign policy. (Irreg.) [IV-WC].

**HSCI 3473 History of Ecology and Environmentalism 3 Credit Hours**

Prerequisite: junior standing, or completion of one History of Science lower-division course, or permission of instructor. Explores the historical development of ecology as a science and as a political stance, from the eighteenth through the twentieth century. Topics may include: climate change, population control, deforestation, globalization, resource management, and environmental ethics. (Irreg.) [IV-WC].

**HSCI 3483 Technology, Politics, and International Development 3 Credit Hours**

Prerequisite: Junior standing, or completion of one History of Science lower-division course, or permission of instructor. Explores the interactions between politics and technology that have informed efforts to produce "developed" industrial societies around the world. Examines the emergence of development thinking and practice in Japan and the colonized world, international development and the technopolitics of decolonization, and contemporary issues in technology and development. (Irreg.) [IV-NW].

**HSCI 3493 The History of Media 3 Credit Hours**

Prerequisite: junior standing, or completion of one History of Science lower-division course, or permission of instructor. An introduction to the history of informational technologies and communications media from the printing press to the internet. Topics will include the print revolution, the advent of electronic communications, the growth of broadcast media, the development of the digital computer, and the internet boom. Course materials include novels and films as well as non-fiction. (Irreg.) [IV-WC].

**HSCI 3533 Science and Global Politics in the Modern Era: Cross-Cultural Perspectives 3 Credit Hours**

Prerequisite: Junior standing. Focuses on interactions between professional scientists, corporate entities, advocacy groups, NGOs, the public, and the state, with case studies drawn from different national contexts in order to make cross-cultural comparisons. Students will develop an international perspective on this topic by focusing on both western and non-western national contexts. Topics may include such issues as public health; biotechnology; bioprospecting; organ trafficking; the information revolution; clinical trials for drug-testing; expert testimony; climate change; weapons development; mass transit; and science and engineering education. (Irreg.) [IV-WC].

**HSCI 3550 Topics in the History of Science 1-3 Credit Hours**

1 to 3 hours. Prerequisite: junior standing or permission of instructor. May be repeated with change in content; maximum credit six hours. Topics of special interest in the history of science. (Irreg.)

**HSCI 3813 Science in the Ancient World 3 Credit Hours**

Prerequisite: junior standing, or completion of one History of Science lower-division course, or permission. An examination of science in antiquity. Topics include the origins of ancient science, the transmission and interaction of various scientific traditions, the relation between science and philosophy, the development of a concept of science, and the place of science within the cultures of the period. (Irreg.) [IV-WC].

**HSCI 3823 Science in Medieval Culture 3 Credit Hours**

Prerequisite: junior standing, or completion of one History of Science lower-division course, or permission. A survey of the historical development of medieval scientific, mathematical, medical, and philosophical thought. (Irreg.) [IV-WC].

- HSCI 3833 The Scientific Revolution 3 Credit Hours**  
Prerequisite: junior standing, or completion of one History of Science lower-division course, or permission of instructor. Explores the history of the "scientific revolution" of the sixteenth and seventeenth centuries. Study includes understanding debates not just about what happened in the past but about how we today define science and how we understand the place of science in the modern world. (Irreg.) [IV-WC].
- HSCI 3960 Honors Reading 1-3 Credit Hours**  
1 to 3 hours. Prerequisite: admission to Honors Program. May be repeated; maximum credit six hours. Will consist of topics designated by the instructor. The topics will cover materials not usually presented in regular coursework. (F, Sp, Su)
- HSCI 3970 Honors Seminar 1-3 Credit Hours**  
1 to 3 hours. Prerequisite: admission to Honors Program. May be repeated; maximum credit six hours. The projects covered will vary. The content will deal with concepts not usually presented in regular coursework. (Irreg.)
- HSCI 3980 Honors Research 1-3 Credit Hours**  
1 to 3 hours. Prerequisite: admission to Honors Program. May be repeated; maximum credit six hours. Will provide an opportunity for the gifted Honors candidate to work at a special project. (Irreg.)
- HSCI 3990 Independent Study 1-3 Credit Hours**  
1 to 3 hours. Prerequisite: permission of instructor and junior standing. May be repeated once with change of content. Independent study may be arranged to study a subject not available through regular course offerings. (F, Sp, Su)
- HSCI 3993 Junior Seminar 3 Credit Hours**  
Prerequisite: 9 hours of history of science classes or permission of instructor; if repeating course, permission of undergraduate academic adviser. May be repeated with change of content; maximum credit 6 hours. Offers students the chance to work on an extended research topic in the history of science, technology, environment and medicine. The themed seminar format will allow for small group discussion and close supervision of student projects. Students will be introduced to the methods and tools of advanced research. Seminar themes will vary. (Sp)
- HSCI 4613 Issues and Methods in the Digital Humanities 3 Credit Hours**  
(Slashlisted with HSCI 5613) Prerequisite: junior standing or one previous HSCI course or permission of instructor. Through interdisciplinary exploration students read, discuss, hack, and reflect with experts in the areas of history and history of science, information studies, geography, literature, classics, computer science, media studies, anthropology, political science, communication, and more. Students will not only become more literate in interpreting digital culture but in applying the technologies of the digital world, acquiring new competencies and insights in the process. No student may earn credit for both 4613 and 5613. (Irreg.)
- HSCI 4623 Practicum/Internship in the Digital Humanities 3 Credit Hours**  
(Slashlisted with HSCI 5623) Prerequisite: junior standing or one previous HSCI course or permission of instructor. May be repeated; maximum credit 9 hours. A practical, project-based internship, focused on the design and development of a project in the digital humanities under the close supervision of a faculty member. No student may earn credit for both 4623 and 5623. (F, Sp)
- HSCI 4960 Directed Readings 1-4 Credit Hours**  
1 to 4 hours. Prerequisite: good standing in University; permission of instructor and dean. May be repeated; maximum credit four hours. Designed for upper-division students who need opportunity to study a specific problem in greater depth than formal course content permits. (Irreg.)
- HSCI 4970 Special Topics/Seminar 1-3 Credit Hours**  
1 to 3 hours. Prerequisite: Senior standing or permission of instructor. May be repeated; maximum credit nine hours. Special topics or seminar course for content not currently offered in regularly scheduled courses. May include library and/or laboratory research and field projects. (Irreg.)
- HSCI 4990 Independent Study 1-3 Credit Hours**  
1 to 3 hours. Prerequisite: three courses in general area to be studied; permission of instructor and department. May be repeated; maximum credit six hours. Contracted independent study for topic not currently offered in regularly scheduled courses. Independent study may include library and/or laboratory research and field projects. (F, Sp, Su)
- HSCI 4993 Capstone in History of Science, Technology, and Medicine 3 Credit Hours**  
Prerequisite: junior standing and permission of instructor. This course fulfills the capstone requirement for a major in the history of science, technology and medicine. The goal of this seminar-format course is to provide students with the opportunity to further develop their skills in research, writing, and critical analysis with respect to the historical study of science. The course provides the opportunity for in-depth individualized research within the framework of shared study. (F) [V].
- HSCI 5513 Advanced Studies in the History of Ancient and Medieval Science 3 Credit Hours**  
Prerequisite: 3013 or equivalent, or permission of instructor. May be repeated with change of content; maximum credit 12 hours. Thematic historical analyses of ancient and/or medieval foundations of science, focusing on the development of particular disciplines or scientific institutions, the relationship between science and religion, or transmission of science. Includes examination of sources and critical assessment of scholarly interpretations. (Irreg.)
- HSCI 5523 Adv. Stds. In The History Of Renaissance & Early Modern Sci. 3 Credit Hours**  
Advanced Studies In The History Of Renaissance And Early Modern Science. Prerequisite: 3013 Or 3023, Or Equivalent; Or Permission Of Instructor. May Be Repeated With Change Of Content; Maximum Credit 12 Hours. Thematic Historical Analyses Of Scientific Ideas And Practices In The Scientific Revolution And The Enlightenment, 16th-18th Cen- Turies. Includes Examination Of Sources And Critical Assessment Of Scholarly Interpretations. (Irreg.)
- HSCI 5533 Advanced Studies In The History Of Modern Science 3 Credit Hours**  
Advanced Studies In The History Of Modern Science. Prerequisite: 3023, Or Equivalent Or Permission Of Instructor. May Be Repeated With Change Of Content; Maximum Credit 12 Hours. Thematic Historical Analyses Of Modern Science And Culture Focus- Ing On The European And American Development And Professional- Iza- tion Of Scientific Disciplines, Interdisciplinary Relationships Among The Sciences, And Intersections Between Scientific And Pub- Lic Culture. Includes Examination Of Sources And Critical Assess- Ment Of Scholarly Interpretations. (Irreg.)
- HSCI 5550 Topics In The History Of Science 1-3 Credit Hours**  
Topics In The History Of Science. 1 To 3 Hours. Prerequisite: Graduate Standing Or Permission Of Instructor. May Be Repeated With Change Of Content; Maximum Credit Twelve Hours. Topics Of Scholarly Interest In The History Of Science.

**HSCI 5601 Digital Humanities Online Colloquium 1 Credit Hour**

Prerequisite: graduate standing or permission of instructor. May be repeated; maximum credit two hours. An online professional development seminar for graduate students doing advanced work in digital humanities through coursework, internships, and research projects. Students will read and discuss relevant literature, debate issues in digital humanities, critique digital humanities projects, conduct chat sessions and asynchronous discussions with experts, and develop portfolios that demonstrate their skills, expertise, and project work. (F, Sp)

**HSCI 5613 Issues and Methods in the Digital Humanities 3 Credit Hours**

(Slashlisted with HSCI 4613) Prerequisite: graduate standing or permission of instructor. Provides a graduate-level introduction to the central issues, methods, and tools in the emerging field of the digital humanities. Digital humanities is an interdisciplinary set of methods, concepts, values, and practices that enable scholars to create and apply new technologies to answer social, cultural, and historical questions. No student may earn credit for both 4613 and 5613. (Irreg.)

**HSCI 5623 Practicum/Internship in the Digital Humanities 3 Credit Hours**

(Slashlisted with HSCI 4623) Prerequisite: graduate standing or permission of instructor. May be repeated; maximum credit 9 hours. A practical, project-based internship, focused on the design and development of a project in the digital humanities under the close supervision of a faculty member. No student may earn credit for both 4623 and 5623. (F, Sp)

**HSCI 5960 Directed Readings in the History of Science 1-4 Credit Hours**

1 to 4 hours. Prerequisite: graduate standing and permission of instructor. May be repeated with change of content; maximum credit six hours toward M.A. degree, 12 hours toward Ph.D. degree. Intensive readings in a selected area of the history of science, under the direction of a graduate faculty member. (F, Sp, Su)

**HSCI 5970 Seminar: Research, Criticism and Analysis 2-3 Credit Hours**

2 to 3 hours. Prerequisite: permission of instructor. May be repeated with change of content; maximum credit 15 hours. Fundamentals of investigation and exposition in the history of science. (F, Sp)

**HSCI 5980 Research for Master's Thesis 2-9 Credit Hours**

Variable enrollment, two to nine hours; maximum credit applicable toward degree, four hours. (F, Sp, Su)

**HSCI 5990 Special Studies 3-5 Credit Hours**

3 to 5 hours. Prerequisite: permission of instructor. May be repeated with change of content; maximum credit nine hours. Specialized studies in the history of science. Individual research culminating in the preparation of a research paper. (F, Sp, Su)

**HSCI 6960 Directed Readings 1-3 Credit Hours**

1 to 3 hours. Prerequisite: graduate standing or permission of instructor. May be repeated; maximum credit six hours. Directed readings and/or literature review under the direction of a faculty member. (Irreg.)

**HSCI 6970 Seminar in the History of Science 2-3 Credit Hours**

2 to 3 hours. Prerequisite: permission of instructor. May be repeated with change of content; maximum credit 15 hours. Advanced study and historical criticism in specialized areas. (F, Sp)

**HSCI 6980 Research for Doctoral Dissertation 2-16 Credit Hours**

2 to 16 hours. (F, Sp, Su)

**HSCI 6990 Independent Study****1-3 Credit Hours**

1 to 3 hours. Prerequisite: Graduate standing and permission of instructor. May be repeated; maximum credit nine hours. Contracted independent study for a topic not currently offered in regularly scheduled courses. Independent study may include library and/or laboratory research and field projects. (Irreg.)