The Department of the History of Science and Technology offers an undergraduate program leading to the degree of Bachelor of Arts with a major in science, medicine, and technology, and a graduate program leading to the degree of Doctor of Philosophy.

Undergraduate Programs

The department offers a variety of courses that deal with the history of the conceptual and technical development of the sciences, as well as the cultural and social impact of science and technology on civilization. These courses are open to all undergraduates in the Schools of Arts and Sciences and Engineering. A few of the courses require some background in an appropriate science, but most are accessible to those with no specialized knowledge who want to understand the part science has played in shaping modern culture. Students who have concerns about their technical competence for a given course should consult the professor involved.

Major in History of Science, Medicine, and Technology

Offered in cooperation with the Institute of the History of Medicine, this major allows students to combine substantive work in science with study of the social and historical context of modern science, medicine, and technology. The aim of the program is to produce graduates who are scientifically literate and technically competent, and who at the same time understand science and medicine not as static, autonomous enterprises but rather as modes of thought that have developed in specific social contexts.

The major is appropriate for any student planning a career in medicine or other areas of the health care industry. It is also flexible enough to serve as a basis for a variety of careers where an informed knowledge of science and technology and their impact on society is important. Such careers include broad areas of business and industry, journalism, teaching, museum work, and specialized areas of law and public policy.

Requirements for the B.A. Degree

Also see Requirements for a Bachelor’s Degree. (http://e-catalog.jhu.edu/undergrad-students/academic-policies/requirements-for-a-bachelors-degree)

- Sciences: Students are required to have a total of 30 credits in science, engineering, and mathematics courses coded (E, N, or Q), of which at least nine credits must be above the 100-level. Laboratory courses in science count toward this requirement. Calculus I is strongly recommended.
- History of Science, Medicine and Technology: A total of 24 credits of course work in the history of science, medicine and technology are required. These must include at least two survey courses and four additional courses above the 100-level.
- Students in their senior year may take graduate courses with permission.
- A minimum grade of C- is necessary in all courses applied toward the requirements of the major and requirements may not be taken satisfactory/unsatisfactory. Each course must be at least 3 credits.

<table>
<thead>
<tr>
<th>Two Survey Courses (select from the following): *</th>
<th></th>
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<tbody>
<tr>
<td>AS.140.105 History of Medicine</td>
<td>6</td>
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<tr>
<td>AS.140.106 History of Modern Medicine</td>
<td></td>
</tr>
<tr>
<td>AS.140.301 History of Science: Antiquity To Renaissance</td>
<td></td>
</tr>
<tr>
<td>AS.140.302 Rise of Modern Science</td>
<td></td>
</tr>
<tr>
<td>AS.140.321 Scientific Revolution</td>
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</table>

<table>
<thead>
<tr>
<th>Additional History of Science, Medicine &amp; Technology Courses **</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Two history of science, medicine &amp; technology courses at any level</td>
<td>6</td>
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<tr>
<td>Four 200-400 level history of science, medicine &amp; technology courses</td>
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<thead>
<tr>
<th>Science, Math, or Engineering Courses (N, Q, or E)</th>
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<tbody>
<tr>
<td>Nine credits of 200-level or higher N, Q, or E courses</td>
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</tr>
<tr>
<td>Twenty-one credits of N, Q, or E courses at any level</td>
<td>21</td>
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</table>

Total Credits 54

* Other courses might serve to fulfill the survey course requirement with permission of the director of undergraduate studies.

** The courses AS.140.411 Senior Research Seminar and AS.140.412 Research Seminar may not be used towards this requirement.

Sample Program

A typical program might include the following sequence of courses:

<table>
<thead>
<tr>
<th>Freshman</th>
<th>Credits</th>
<th>Spring</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>AS.140.1xx Freshman</td>
<td>3</td>
<td>AS.140.1xx Freshman</td>
<td>3</td>
</tr>
<tr>
<td>Seminar or other AS.140.xxx elective</td>
<td></td>
<td>Seminar or other AS.140.xxx elective</td>
<td></td>
</tr>
<tr>
<td>Any level N,Q,E course</td>
<td>3</td>
<td>Any level N,Q,E course</td>
<td>3</td>
</tr>
<tr>
<td>Any level N,Q,E course</td>
<td></td>
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<td></td>
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<td></td>
<td>6</td>
<td></td>
<td>9</td>
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</table>

<table>
<thead>
<tr>
<th>Sophomore</th>
<th>Credits</th>
<th>Spring</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Survey course like</td>
<td>3</td>
<td>Survey course like</td>
<td>3</td>
</tr>
<tr>
<td>AS.140.105 or AS.140.321</td>
<td></td>
<td>AS.140.106 or AS.140.302</td>
<td></td>
</tr>
<tr>
<td>200 level or above N,Q,E course</td>
<td>3</td>
<td>200 level or above N,Q,E course</td>
<td>3</td>
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<tr>
<td>200 level or above N,Q,E course</td>
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<td>9</td>
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<table>
<thead>
<tr>
<th>Junior</th>
<th>Credits</th>
<th>Spring</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS.140.xxx HSMT elective above 100 level</td>
<td>3</td>
<td>AS.140.xxx HSMT elective above 100 level</td>
<td>3</td>
</tr>
<tr>
<td>AS.140.xxx HSMT elective above 100 level</td>
<td></td>
<td>Any level N,Q,E course</td>
<td>3</td>
</tr>
<tr>
<td>Any level N,Q,E course</td>
<td>3</td>
<td>Any level N,Q,E course</td>
<td>3</td>
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<td></td>
<td>9</td>
<td></td>
<td>9</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior</th>
<th>Credits</th>
<th>Spring</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS.140.411 Senior Research Seminar (Optional)</td>
<td>2</td>
<td>AS.140.412 Research Seminar (Optional)</td>
<td>2</td>
</tr>
</tbody>
</table>

http://host.jhu.edu/
Honors in the Major

Students who demonstrate excellence in course work are eligible to write an honors thesis (AS.140.411 Senior Research Seminar and AS.140.412 Research Seminar) in their final year for additional credits. Students must have outstanding recommendations from two department members to be eligible for the thesis. Departmental honors are conferred if a student has a GPA of 3.5 or better in major requirements and receives a grade of A- or better on the thesis.

Minor in the History of Science, Medicine and Technology

The department offers a minor which may be combined with other science, social science, or humanities majors. To complete the requirements for the minor, students must have a total of 18 credits in the history of science, medicine, or technology, including at least one survey course. A minimum grade of C- is necessary in all courses applied toward the requirements of the major and requirements may not be taken satisfactory/unsatisfactory. Each course must be at least 3 credits.

One Survey Course (select from the following): * 3
- AS.140.105 History of Medicine
- AS.140.106 History of Modern Medicine
- AS.140.301 History of Science: Antiquity To Renaissance
- AS.140.302 Rise Of Modern Science
- AS.140.321 Scientific Revolution

Additional History of Science, Medicine & Technology Courses

Five history of science, medicine & technology courses at any level 15

Total Credits 18

* Another course might serve to fulfill the survey course requirement with permission of the director of undergraduate studies.

Graduate Program

Ph.D. in the History of Science and Technology

The graduate program in the history of science and technology leads to the Ph.D. degree. Although an M.A. degree is granted, candidates who seek only that degree are not ordinarily admitted. The object of the Ph.D. program is to provide the rigorous training necessary for a scholarly career in teaching and research; consequently, the focus of the student’s activity will be the research seminars of the department. Faculty from the Institute of the History of Medicine in the School of Medicine also participate in the program.

Admission

Application deadline is January 15. All official supplemental materials (official transcripts, official GRE scores, and, when applicable, official TOEFL scores) should be sent directly to the Graduate Admissions Office at:

Johns Hopkins University
Full-time Graduate Studies in Arts, Sciences, and Engineering
Graduate Admissions Office
W601 Wyman Park Building
3400 North Charles Street

Baltimore, Maryland 21218 USA

For further information on our faculty and programs, please visit our website at: http://host.jhu.edu.

Requirements for the Ph.D. Degree

Before candidates begin full-time research on their dissertations, they must prepare themselves adequately in the appropriate fields of knowledge, become skilled in the techniques of historical research, and be able to carry out a sustained piece of historical analysis and writing.

In the first year of the program students are introduced to the methods and techniques of research and complete a year-long survey course in the history of science or the history of medicine. Students in their second year of study present a research paper to the department. In the second and third years of study, students complete three “fields” or concentrations. One field should be within the Program, one in a historical discipline outside the Program, and the third is negotiable depending on student interests and needs. Our students have also done historical fields with curators or research historians at the Smithsonian Institution.

The third field can extend beyond historical subjects and may involve a scientific subject, for example. A field is intended to demonstrate a student’s mastery of a specific body of knowledge, both for the student’s own scholarly work and as a preparation for teaching. The fields are individually arranged and satisfied. Before being admitted for formal candidacy for the degree, the student must also demonstrate a reading knowledge of two foreign languages. The final requirement for the Ph.D. degree is the completion of a dissertation that is an original contribution to historical knowledge and of a standard suitable for publication.

The History of Science and Technology is by its nature interdisciplinary, and students are encouraged to undertake study in related areas such as history, philosophy, and the natural and medical sciences.

Facilities

The Eisenhower Library and the Welch Medical Library contain about two million volumes, including the special collections of the Institute of the History of Medicine in Baltimore. These research facilities are supplemented by the rare book holdings at Evergreen House, the Pratt Library, and the Peabody Library.

Other important research collections are available to students. In Philadelphia, collections include the Chemical Heritage Foundation, the American Philosophical Society, and the Academy of Natural Sciences. The Hagley Museum and Library’s collections in the history of American science and technology are within easy distance of campus, as are the incomparable holdings of the Smithsonian Institution, the Library of Congress, the National Library of Medicine, and other governmental agencies in Washington, D.C.

Financial Aid

The department has several graduate fellowships and teaching assistantships. Students may also be eligible for federal financial support through the National Science Foundation. Information on these and other fellowships can be obtained through the fellowship advisor at the student’s college, or from the Fellowship Office of the National Academy of Sciences, National Research Council, Washington, D.C. 20025. In the recent past, doctoral candidates have also won support for their research in the United States and abroad through such sources as the Smithsonian Fellowships, the Fulbright-Hays grants, the Spencer Foundation, and the Deutscher Akademischer Austauschdienst (DAAD) Fellowship.

AS.140.xxx HSMT elective above 100 level 3
Any level N,Q,E course 3

Total Credits: 58

Graduate Program

Ph.D. in the History of Science and Technology

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For current faculty and contact information go to http://host.jhu.edu/people/

Faculty
Chair
Maria Portuondo
Associate Professor: History of science, science and exploration, science and technology in Latin America, early modern Spanish and Latin American Cosmography and geography.

Professors
Robert H. Kargon
Willis K. Shepard Professor of the History of Science: history of physics; science and social change; science in America.

Sharon Kingsland
History of biology, especially ecology, genetics and behavioral biology; science in America.

Stuart W. Leslie
History of technology, history of science-based industry.

Lawrence M. Principe
Drew Professor of the Humanities, history of chemistry and alchemy, early modern science, science and religion.

Assistant Professors
Yulia Frumer
History of science, Japanese history.

Joris Mercelis
History of modern technology, especially technology related to chemical industries.

Affiliated Faculty School of Medicine
Nathaniel C. Comfort
Professor: history of biology, especially genetics, molecular biology, and biomedicine; history of recent science, oral-history and interviewing. Current project: History of human and medical genetics in America.

Mary E. Fissell
Professor: European health care and popular medicine, 17th and 18th centuries; early modern gender and the body.

Jeremy Greene
Elizabeth Treide and A. McGehee Harvey Chair in History of Medicine, Associate Professor: 20th century clinical medicine, therapeutics, pharmaceuticals, global health, history of disease.

Marta Hanson
Associate Professor: history of East Asian Medicine; History of Chinese science and medicine; history of epidemics and disease in China.

Graham Mooney
Assistant Professor: history of public health, 19th and 20th centuries; historical epidemiology; historical demography; disease surveillance and risk.

Randall M. Packard
William H. Welch Professor of History of Medicine: history of disease; public health; and medicine, health, and disease in Africa.

Gianna Pomata
Professor: medieval and Renaissance European medicine; natural history; Italy; history of history and of scholarship.

Daniel P. Todes
Professor Emeritus: history of Russian medicine and science, social relations of scientific thought, history of biomedical sciences.