

Department of History of Science – Assessment Plan

Spring 2013

The current call for assessment plans comes at a moment when the History of Science department is undertaking the most extensive revision of its major in many years. We anticipate that we will submit the new major for review by the L&S Curriculum Committee in September of 2013, but a couple of key details remain to be worked out. The first issue to be resolved is the introduction of a new 200-level research/writing seminar modeled on the History Department's very successful 201 course; the second concerns a revision of our existing capstone 555 seminar, with the intention of creating a more coherent and limited set of learning outcomes than it has had in the past.

Given the current state of flux in our curriculum, we offer here a brief sketch of the new structure of our major, presented in terms of three tracks we envision for it. For each track we will offer an overview of the learning outcomes connected with it, and then the learning outcomes we expect from our major as a whole. In general the outcomes connected with each track can be described as cognitive or conceptual goals, while the outcomes for the major as a whole are best described in terms of particular skills. After this sketch of the major, we will propose the assessment methods we hope to introduce.

1. The New Major – Structure and Justification

Traditionally, our major in history of science, medicine, and technology has served two disparate undergraduate constituencies. Our largest group of undergraduates comes from the natural sciences and engineering, who take up our major as a way of deepening their understanding of the science or sciences they are most engaged with. They come to us, in other words, not to satisfy some general education science requirement but instead to gain perspective on their commitment to studying science, often with medical aspirations, or engineering. A second and smaller group comes to us from a humanities orientation, often as part of our joint major with the History Department. For them the study of science, medicine and technology complements a thematic interest in subjects such as women and gender, or intellectual history.

To adapt ourselves better to these diverse constituencies, the department proposes structuring its major into three discrete tracks, each designed to meet the interests of a different group of students:

- *History and Science* – For students who are taking our major along with another major in one of the sciences or engineering. It emphasizes courses that deal with the history of individual sciences and technology.
- *Social and Cultural History of Science* – For students interested in the cultural, social, literary, aesthetic, political, and/or philosophical dimensions of science. This track encompasses our joint major with History.
- *Health and Society* – This track is designed for students with strong interest or background in the health professions, or those students whose particular interests are oriented toward studying the historical dimensions of health. This could include courses by faculty in Medical History and Bioethics who are not historians.

2. Learning Outcomes

- a. *For the Major in History of Science, Medicine, and Technology, regardless of track (skill-based).* Students will learn:
 - To analyze and critique different rhetorical arguments and understand the different styles of reasoning and argument between science and history,
 - To synthesize information from diverse sources.
 - To formulate research questions appropriate to a particular historical object in science, technology, or medicine; to identify the range and limitations of primary and secondary sources for researching those questions; and to open up students to creative, original thinking about such questions.
 - To present the results of research in the form of clear writing that combines historical narrative with analytical and synthetic arguments.

- b. *For the History, Science, and Technology Track (conceptual).* Students will learn:
 - To describe the significance of key people, institutions, and events in the history of their scientific field.
 - To identify the social, cultural, and institutional forces that shape science and technology, and understand how scientific knowledge interacts with other forms of knowledge.
 - To describe and compare ways in which reliable scientific knowledge has been constituted at different points in history.

- c. *For the Social and Cultural History of Science Track (conceptual).* Students will learn:
 - To recognize and analyze expressions and adaptations of scientific ideas in diverse cultural media such as literature, cultural criticism, philosophy, art, music, and film.
 - To understand the social, cultural and institutional forces that shape the evolution of “science” as a recognized part of culture and apply theories and analytical techniques from other humanities and social science disciplines to the study of science.
 - To gain a deeper appreciation for the role of scientists and scientific knowledge in shaping cultures and societies.

- d. *For the Health and Society Track (conceptual).* Students will learn:
 - To describe and compare ways in which reliable medical knowledge has been constituted at different points in history.
 - To be able to employ historical knowledge and analytical techniques to critically assess contemporary medicine.
 - To synthesize and understand the differences between historical perspectives on health care and ethical, sociological, economic, and anthropological perspectives.
 - To be able to develop nuanced analytical arguments about complex social and ethical issues in medicine.

- To gain a deeper appreciation for the role of health practitioners and medical knowledge in shaping culture and societies

3. Assessment Tools

In the past our standard practice has been to focus our assessment on the capstone seminar. Students in the capstone course were evaluated based on: 1) evaluation by faculty committee of the final papers from the capstone; 2) an annual report prepared by the faculty member teaching the capstone seminar; and 3) exit interviews to assess students' overall experience of the major. With the prospect of another required research-writing course based on History 201, we propose the following assessments:

For the Major (skills outcomes)

An on-line test to be administered during the first week of the proposed 200-level course and again at the end of the course to directly determine students' basic research skills, including ability to differentiate informational content and value of primary and secondary sources, and ability to apply basic critical skills to historical information.

A review of papers written for the capstone seminar by 2 members of the department's undergraduate curriculum committee to directly determine students' use of historical sources and ability to synthesize primary and secondary materials into narratively and argumentatively coherent research papers.

For the Tracks in the Major (conceptual outcomes)

Students in the capstone seminar will be given an on-line exit survey that will ask them to articulate their understanding of the core issues connected with their particular track through the major and how well the major as a whole helped them formulate a clear comprehension of these issues. This information will be used to evaluate the success of each track in articulating a clear set of conceptual outcomes.