This course is a team-taught graduate survey of the history of science, intended to broaden and deepen the content presented in HSCI 3023 (which, in most cases, you will be auditing in conjunction with this graduate course), and to introduce you to advanced historiography that relates to the modern period. You will encounter both classic work in the discipline as well as more recent viewpoints. In conjunction with your auditing of HSCI 3023, the goal for this 5990 supplement is to provide you with a working knowledge of the basic “canon” of topics and historiographical issues in the modern period, and an awareness of the broad array of themes and content that constitute the larger web of connections in thinking about the history of modern science and technology. In reaching this goal you will be better prepared to undertake such tasks as build your own bibliographies for further study and research and be better prepared to serve as a teaching assistant in the undergraduate survey at a later date, due to a fuller knowledge of the historical background and historiography.

Course Mechanics

**3023 Component:** All students in this 5990 are expected to be directly involved in one of the 3023s being offered this semester, either as an actively auditing student or as the course GTA. The professor for the 3023 you take will specify the exact nature of your obligations to that course, but you should expect, at a minimum, to be required to attend the lectures and discussions and to do the readings. Some faculty may ask you to do weekly homework assignments or to take quizzes and exams as well; some may not.

**Assignments:** For the most part, the course will meet weekly as a seminar (exceptions are noted in the schedule below). Students are expected to turn in a writing assignment each week. Some instructors have provided specific instructions on how to structure the short writing assignments and given you specific questions to answer. If there are no specific instructions, the assignment will be a 750-900-word review of the readings for that week. The review should go beyond summarizing key points and provide analysis of the topic. If you are unclear about the expectations for any particular assignment, please ask the relevant professor.

**Grading:** Your grade for the course will be determined by all five participating faculty. It will depend upon both your writing assignments and your participation in the weekly discussions, with the writing assignments being weighted more heavily.

**Readings:** For the required reading, we will seek to place copies of texts owned by OU on reserve; those in the general stacks will be placed on reserve at the Bizzell Circulation Desk, and those owned by the HSCI Collections will be shelved in a place to be determined by Dr. Palmeri. If articles are part of the required reading we will place copies on a designated shelf in PHSC if no online access is available. We do this as a convenience for you, and in recognition of the costs of course materials. We do urge you to consider buying course materials as part of your graduate training. Sources such as amazon.com often offer discounted prices for new texts and access to used copies; bookstores such as abe.com, alibris.com, bookfinder.com, and others are also helpful sources for used books. *Note:* If you are planning on relying on reserve materials for writing your papers, it will be to your benefit to develop time-sharing expectations with the other seminar participants, to prevent any last-minute train wrecks in the days before a paper is due.
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1) **Thursday, January 14 — Introductory class**

Instructors: Dr. Stephen Weldon, Dr. Hunter Heyck, Dr. JoAnn Palmeri, Dr. Katherine Pandora, Dr. Piers Hale, Dr. Suzanne Moon, Dr. Peter Soppelsa

**Instructor: Dr. Katherine Pandora: Assessing the Standard Narrative**

The “standard narrative” of chronology, topics, people, and concepts that has characterized “the modern Survey” taught by successive cohorts of historians of science since the 1950s is one of the most basic meeting points that exists between the discipline and the public. In what form have these founding assumptions persisted, changed, or been challenged, and how do these results shape the lessons we teach in the 21st century? In this segment of 5990 we will put these questions to work by examining two case studies: what impact the emergence of “women’s history” in the 1970s may have had on “the standard narrative” and “the modern Survey,” and to
what extent the “open-ended” methodologies of cultural history that emerged in the 1980s have or have not elicited changes in how historians of science introduce the historical foundations of modern science to novices.

Thursday, January 23: Women’s Histories of Science: Optional, Obsolete, or “Other”?

For 1/23, please read Berglund’s book on Maria Mitchell, as well as look through the supplementary items. What I would like you to bring with you is one page or so of notes about the pedagogical benefits and drawbacks of including Mitchell’s story into a survey course on modern history of science -- together, in class, we will see what happens when we take these points under consideration in planning a hypothetical course. To be clear, what you’ll produce is a set of notes, not a finished essay. If you have any queries about the process, please don’t hesitate to ask me (kpandora@ou.edu).

The other three items under “Reading” will be background for our discussion. The items under “Further Reading” are for later reference if you would like to explore additional perspectives.

Reading:

Renee Berglund, Maria Mitchell and the Sexing of Science: An Astronomer among the American Romantics (Beacon Press, 2008) || On 3-day reserve at the Bizzell Circulation Desk under HSCI 5990, “Modern Survey in the History of Science” (They will list it as either Pandora or Weldon)


Naomi Weisstein, “‘How can a little girl like you teach a big class of men?’ -- the Chairman Said and other Adventures of a Woman in Science.” In S. Ruddick and P. Daniels, eds., Working it Out: 23 Writers, Artists, Scientists and Scholars Talk About Their Lives and Work (Pantheon, 1977) || online at http://www.uic.edu/orgs/cwluherstory/CWLUMemoir/naomiscientist.html


Further Reading:


Thursday, January 30: Open-Ended Research Methods and the Nature of Cultural History: What if Questions are More Important than Answers?

For 1/30, we shift from a topical emphasis to a methodological emphasis, and ask what changes might be required in the undergraduate survey when the orientation shifts from framing it as intellectual history to cultural history. For this historiographic exercise, you will be choosing your own text from a list of about thirty (see link below). The Geertz and Glassie readings are supplementary background for our discussion (please note that the Glassie is a long piece, so waiting to the last minute for this one isn’t a good idea. It is beautifully written so it is not a hard slog, but it is full of ideas that are considered at length. You can access this item via the online library catalog or on reserve.) The “Further Reading” is for later reference if you would like to see how the hypotheses and patterns we identify relate to research in American cultural history.

Your written assignment will come in two parts: 1) For 1/30, write approximately two to three pages suggesting potentially significant ways in which the topic in your text relates to the larger historical and cultural context in which it is embedded (you will turn in a copy to me and you will keep a copy); and 2) After our class discussion, you will write approximately two pages of any additional thoughts you now have relating to the topic and its historical and cultural contexts, and append it to your first draft (you will turn in the now 4-5 page paper to me via email: kpandora@ou.edu). To keep these thoughts fresh, my suggested due date is 2/4, although if you would like a different due date given your schedule, let me know.

Reading:

You will choose a text from a list of about thirty books I have put together (it is set up as an amazon.com wishlist, which you should be able to access here: http://amzn.com/w/1E8Y24B472E4A . I will also send the link via email). Choosing a book as early as possible will allow you to locate a library copy, to ILL the book, to find an online version, or to purchase it. Let me know if you have any problems; I am likely to have a copy as well. You need to let me know your choice by 1/23 so I can prep for the session.


Henry Glassie, “Meaningful Things and Appropriate Myths: The Artifact’s Place in American Studies,” Prospects, 1978, 3:1-49, access via the online catalog || this is also contained in Robert Blair St. George, ed. Material Life in America, which I have placed on reserve.

Further Reading, if interested at a later date:

Halttunen, Karen, ed. A Companion to American Cultural History (Blackwell, 2008) [The library has online access to this text.]
Readings:


Write a 700 word book review of the book, modeled on reviews found in *Isis* or *Technology and Culture*. These should be circulated to me and to the other students by 10 AM Thursday morning.

**Thursday, February 13 — Social Sciences (2)**

Readings:

2) John Carson, "Differentiating a Republican Citizenry: Talents, Human Science, and Enlightenment Theories of Governance," *Osiris*, 2002, 17: 74-103 (on D2L);

Write a 700 word book review of the book, modeled on reviews found in *Isis* or *Technology and Culture*. These should be circulated to me and to the other students by 10 AM Thursday morning.

**Instructor: Dr. Suzanne Moon**

**Thursday, February 20 — Week 1: Technology and Transnational Politics**

Readings:


**Assignment** will be a 4-5 pp. paper, responding to question posted on D2L the week before class and due before class starts.

**Thursday, March 27 —Week 2: Circulating Technologies in Colonial Modernity**

Readings:


**Assignment** will be a 4-5 pp. paper, responding to question posted on D2L the week before class and due before class starts.

**Instructor: Dr. Pete Soppelsa**
Thursday, March 6 -- Disease, Medicine, and Public Health in Global Perspective


Assignment: Use the Internet, the OU library website, or any other finding aids you would like to investigate how scholars distinguish between “world history” and “global history.” Bring a brief bibliography to class which identifies some major sources relevant to this topic.

Thursday, March 13 -- Disease, Medicine, and Public Health in Global Perspective


Assignment: Write a brief essay (no more than 1,500 words) reviewing the two books I have assigned. Due in class March 13.

Instructor: Dr. JoAnn Palmeri

One goal for these two sessions is for students to become familiar with topics and trends in the history of 19th/20th century astronomy. We will read historiographical essays and examples of scholarly work in the field, and then examine how two different historians have treated the same historical episode (the resolution of the Steady State-Big Bang cosmological debates).

A second goal is for students to acquire a sense of the professional landscape of a particular subfield in the discipline. I will discuss some of my own experiences with the community of professional historians of astronomy to illustrate the types of networking and professional opportunities available to you as you move along in your career.

Thursday, March 27 — *Modern Astronomy (I)*

Readings & Class Assignments

1. Syllabi

To put this subfield in perspective, let’s start by examining how astronomy after the Scientific Revolution is treated in typical survey courses. Bring a copy of the syllabus from a recently taught HSCI 3023 class, or from a section you are currently auditing. Browse my syllabus on D2L.

2. Research Articles

We will use the following studies to prompt discussion on the trends, topics and methods in the history of 19th/20th century astronomy. Readings not posted on D2L are available through OU’s online library catalog.

b. Read and present a brief oral report to the class on an article selected from the list posted on D2L. Email me your first and second choices by Mar. 14. Your report should include a summary of the argument, a discussion of the author’s approach (characterization of method/sources used), and your general response to what you have read. You should also include basic information about the author and the journal. Most of these articles should be available through OU’s online library catalog. If not, request a copy at the History of Science front desk.

3. Background Reading and Resources (for both weeks)

- Review the list of online resources posted on D2L "Researching History of Modern Astronomy”
- Browse the books which have been set aside on the class shelf/cart in the stacks

Written Assignment

In a 3-4 page essay you will explore some aspect of the historiography of modern astronomy. You may focus your discussion on the article you selected, or on the Kragh/Smith article, or on some theme you find of interest in these readings and the background materials. You may choose to situate the history of modern astronomy within the context of broader trends in the history of science, or with respect to other topics with which you are familiar (history of technology, gender studies). Use Chicago style end notes for citations.

Thursday, April 3 — Modern Astronomy (2)

Readings

These works are available on reserve in Bizzell or in the History of Science Collections, and/or through the dissertation database.


Written Assignment

Prepare a 4-5 page essay with McConnell’s work as the focus. Depending on your interest, you may approach the assignment in a number of ways. You can compare and contrast McConnell’s account of this historical episode with that of Kragh’s, or you can discuss and analyze McConnell’s case study as history. Or, you may want to discuss and situate these two historical studies within the context of trends in the subfield or the broader discipline. As appropriate, you should reflect upon McConnell’s
historical approach, analyze his selection and use of sources, and address the effectiveness of his arguments. Use Chicago style end notes for citations.

Instructor: Dr. Piers Hale

Reading Texts: Reading Vestiges and reading Victorian Britain.
In Victorian Sensation James Secord looks at the publication and reception of the anonymously published Vestiges of the Natural History of Creation. In the process we learn a lot about the production and place of books and magazines in the various literary cultures of mid-Victorian British society, as well as about these cultures themselves. This analysis of Vestiges also brings us to consider the place and role that science had (or was expected to have) in Britain during this period.

Thursday, April 10


Thursday, April 17


Assessment will be a review of the reading (40%) and discussion (60%) each week.

Instructor: Dr. Stephen Weldon

Thursday, April 24 – Science and Religion: Historiography and Theory

Readings:


Assignment: You will write a 3-4 page essay after the class discussion.
Thursday, May 1 -- *Science and Religion around the World*

**Readings:**


**Assignment:** You will write a 3-4 page essay after the class discussion.