History of Science 5970
Research, Criticism, and Analysis
Thursdays 1:30-4:20

This course is designed to introduce graduate students to the discipline of history of science. Readings, assignments, and discussions will be organized in such a way as to give students a broad coverage of the main subfields in history of science, a history of the discipline itself and how it fits into the broader discipline of history, and very practical advice about the nature of research, methods of doing history, and how to meet expectations of scholars in the field.

Course books:

Below are the titles to purchase for class. In addition to these books, you will be reading additional books and essays from various sources:

- *Telling the Truth About History* by Joyce Oldham Appleby, Lynn Hunt, and Margaret Jacob (W. W. Norton, 1995)
- *Historiography In The Twentieth Century: From Scientific Objectivity To The Postmodern Challenge* by Georg G. Iggers (Weslyan University Press, 2005)

General instructions for assignments (specific assignments are on the weekly schedule):

A. Summary/review assignment, extending on the week’s readings (see weekly schedule below regarding the days and topics for this project)

**Assignment:** After doing the reading for the week, find one book or two journals articles that were discussed or that you have found related to the topic, read it/them, and write a 1-2 page summary of the material. In your summary be sure to explain the major thesis of the work, its importance in the discipline, the nature of the evidence and argument used, and any other items of note, such as relevant information about the author. Assume that you are preparing notes that you will need in two years to remind you of the main points of the book. If you have done your job well, someone who has not read the book or articles will be able to read the summary and speak knowledgeably (albeit in a very limited way) about the material even if they have not read it themselves. You are encouraged to evaluate the book or articles yourself, but remember that the main point here is to summarize the material and locate it historiographically in the literature. Ask one person in the class to review your essay. Make changes as suggested. Turn in the final copy with the reviewer’ marked copy. Make the paper available to the entire class on Wednesday night.

B. Practical applications

During the semester, I will ask each of you to do two longer assignments. These are designed to give you some experience preparing for the kind of professional obligations you are likely to have as you continue in this field.

**Submitting a conference proposal:** Look in newsletters and announcements from various sources for information about conferences in the discipline. Find a couple of conferences that you might be interested in submitting a paper to. Do preliminary research for this paper and write the proposal. (This can be combined with a research paper you are working on in another class.)

**Submitting a grant proposal:** Look in various sources for information about grants that you might be eligible for. Prepare and write the proposal. (Students are strongly urged to consider writing an actual
grant proposal, such as the NSF Graduate Research Fellowship. Information on this and other grants will be provided during the September 7 meeting.)

**Writing a conference paper:** From material that you are working on in another class this semester, prepare and write a 20 minute conference paper. Be prepared to present the paper in class and field questions for 5 minutes.

**Writing an essay review:** Write a review of three or four books on a similar topic. For this project you will need to spend some time reading longer multi-book essay reviews. Think about what journal specifically you would be writing this review for and gear your comments to readers of that journal.

**Week 1 (August 24)**

Sources in the history of science

**Class activity:** Basics of research: finding sources. Bibliographies, journals, information sources, etc. Finding your way around the library and the literature in our field.

**General meeting:** New student orientation begins at 3:30 to be led by Hunter Crowter-Heyck, Graduate Student Advisor.

**Week 2 (August 31)**

Objectivity in history and the place of history of science

**Reading:** Appleby, Hunt, Jacob, *Telling the Truth About History*

**Assignment:** Write a 1-2 page essay on the following topic. Think about the stories that are told in this book about the rise and fall of absolutisms since the 17th century. How is the history of science tied directly to theories and ideas about history and historical method according to the authors? What would you characterize as the three main events in the development of ideas from Galileo’s time to the present? How does understanding the historical development of ideas in the West help to understand the rise of certain trends in scholarship in recent years? How would you characterize the main trends in historical scholarship over the last four decades? What is your view of history and science, and does it fit well into this narrative?

Ask one person in the class to review your essay. Make changes as suggested. Turn in the final copy with the reviewer’s marked copy. Make your work available for everyone in the class to read.

Stephen Weldon to introduce himself and his work.

**Week 3 (September 7) – Office of Research Funding Meeting (12:30-3:30)**

**Announcement:** Graduate Fellowship and Funding Opportunities Meeting

Juniors, seniors, and graduate students are invited to attend this workshop presented by the Office of Research Services and the Graduate College. Information about the National Science Foundation Graduate Research Fellowships, NSF Doctoral Dissertation Improvement Grants and other nationally funded fellowships will be provided. Tips on locating funding opportunities, proposal writing, and internal funding for graduate students will be presented. Join us for information and refreshments.

**WHEN:** Thursday, September 7, 12:30-3:30 PM

**WHERE:** Oklahoma Memorial Union Heritage Room 216B (North End, 2nd Floor)

**REGISTER NOW:** [http://research.ou.edu/workshop/workshops.asp](http://research.ou.edu/workshop/workshops.asp)

Popular vs. academic writing in the history of science


**Assignment:** Write a 1-2 page essay on the following topic. Find two history of science articles (10-40 pages each) on similar subjects but written for different audiences—one must be written for specialists in the field, the other written for non-historians of science. What are the differences? What makes the specialist article distinctive? (In other words, what expectations do you think will there be for your writing in this program?) Ask one person in the class to review your essay. Make changes as
suggested. Turn in the final copy with the reviewer’ marked copy. Make your work available for everyone in the class to read.

Week 4 (September 14)

Historiography in the discipline of history

**Reading:** Iggers, *Historiography in the Twentieth Century.*

**Assignment:** Write a 1-2 page essay on the following topic: Find two articles on similar topics/periods/locations in history journals but written with a different historiographical bent. For this assignment, please don’t choose articles which focus solely on history of science topics but do look for a topic that is of interest to you. Think about the nature of the argument in each article; how do the two articles differ? how would classify them historiographically? Analyze these historiographical differences using Iggers where possible to help you classify these works as best you can. Ask one person in the class to review your essay. Make changes as suggested. Turn in the final copy with the reviewer’ marked copy. Make your work available for everyone in the class to read.

**Note:** In order to locate these two different articles, you might look through journals with very different editorial missions (*Journal of Social History* vs. *Journal for the History of Ideas* vs. *Journal of Colonialism and Colonial History*) or articles written decades apart. For this assignment, it is more important for you to think about the historiographical point of view than to worry precisely about the arguments and their accuracy. Also note that if you find one article in a recent journal it can often lead you to earlier articles on similar topics and you can often find answers to historiographical questions by looking carefully at what the authors have to say about how they think their work differs from others.

Steve Livesey and Ken Taylor to talk about NSF Graduate Fellowships

Week 5 (September 21)

Constructivism in history of science, part I


**Assignment:** Book review according to the instructions for the “summary/review assignment” (see above). For this assignment I would like you to select a book specifically, not articles. Using Golinski as the launching point for your project, think about what constitutes constructivism. In addition to the summary of the supplementary material, please explain how it fits into the history of constructivism? Think about how it fits into Golinski’s discussion of identity, disciplinary formation, or the place of production.

Think about the discussion in *Craft of Research* as you tackle this book review; consider what makes a good argument and what does not. How do the sources used help you evaluate the author’s claims in the book you are reviewing? What are the book’s strengths and weaknesses? What does the book claim to do, and what does it convincingly do? In your review, you are encouraged to draw on the other reviews that you’ve found to support or contest the material that you’ve read. You should look at other reviews of this book before you begin your review.

Katherine Pandora to introduce herself and her work.

Week 6 (September 28)

Constructivism in history of science, part II

**Reading:** Golinski, *Making Natural Knowledge*, chaps. 4-6, pp. 103-206.

**Assignment:** Follow the instructions for the “summary/review assignment” as noted above, using the second half of the Golinski book as the launching point for your project to help you select a book or two articles to comment on. As for the previous week, consider how these works relate to the points the Golinski is raising in his book.

Peter Barker to introduce himself and his work.
Week 7 (October 5)

The history of the discipline of the history of science in the United States


Assignment: As you read this material, it is most important for you to get a sense of the history of the institutions than to try to remember all of the individuals mentioned. Think about how specific people have been important to the rise of the discipline. How have the various institutions (universities, societies, journals) contributed to its growth and development? Be prepared to have a discussion over this material.

The history of the discipline of the history of science in England.


Assignment: What are the relationships between political ideology and the rise of the history of science in Britain? When did the discipline become specialized so that historians, not scientists, came to be in control? What are the different motives of historians and scientists? Be prepared to have a discussion over this material.

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Week 8 (October 12)

Midterm paper. This will be one of the “practical application” assignments as listed above. Reading copy for the whole class to be made available on Monday, October 9. We will have a class discussion of these papers.

Hunter Crowther-Heyck to introduce himself and his work.

Week 9 (October 19) – Sam Noble Oklahoma Museum of Natural History – Deborah Kay

Museums and the History of Science


Assignment: Follow the instructions for the “summary/review assignment” (see above).

Science and Visual Culture


Assignment: Follow the instructions for the “summary/review assignment” (see above).

Deborah Kay to introduce herself and her work.

Week 10 (October 26)

Note: For weeks 9-15, each student is responsible for leading one class discussion over one of the reading topics and doing three assignments (one can be on the day you lead class discussion). Everyone is responsible for all of the listed readings each week and should be able to participate actively in discussion over the material. At the end of the list there are two reading topics listed that can be chosen and substituted for topics listed. These substitutions will be determined by student interest.
Comment on writing a longer paper (All students required to do this assignment)

Assignment: Choose one longer project that you are doing this semester, either for this course or for another course. Write a 1-2 page analysis of the way that you have developed your own drafting and revising style. What are some of the advantages of the way that you work? What are the disadvantages? Given constraints on time and resources that we all have, what kind of a system for organizing a large writing project do you find most difficult? Which the most exciting and interesting? Which part is likely to slow you down the most?

Collective Memory

Assignment: Follow the instructions for the “summary/review assignment” (see above).

Science and Biography

Assignment: Follow the instructions for the “summary/review assignment” (see above).

Sandy Holguin to introduce herself and her work.

Week 11 (November 2) – History of Science Society Meeting, Vancouver, No Class

Week 12 (November 9)

Civil Society

Readings: From *Osiris* 17 (2002), *Science and Civil Society*. (selected essays TBA)
Assignment: Follow the instructions for the “summary/review assignment” (see above).

Women, Gender, and Science

Readings: From *Osiris* 12 (1997), *Women, Gender, and Science*. (selected essays TBA)
Assignment: Follow the instructions for the “summary/review assignment” (see above).

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Week 13 (November 16)

Global Power Knowledge

Readings: From *Osiris* 21 (2006), *Global Power Knowledge*. (selected essays TBA)
Assignment: Follow the instructions for the “summary/review assignment” (see above).

Colonialism

Assignment: Follow the instructions for the “summary/review assignment” (see above).

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Week 14 (November 23) – Thanksgiving Break, No Class

Week 15 (November 30)

Scientific Readers

Assignment: Follow the instructions for the “summary/review assignment” (see above).

Generalist Vision

Assignment: Follow the instructions for the “summary/review assignment” (see above).
Kathleen Crowther-Heyck to introduce herself and her work.

The two reading topics below can be used as substitutes for other reading topics listed from weeks 10 to 15 as individual students desire.

Theistic Contexts

Readings: From *Osiris* 16 (2001), *Science in Theistic Contexts*. (selected essays TBA)
Assignment: Follow the instructions for the “summary/review assignment” (see above).

Knowledge and Illness

Readings: From *Osiris* 19 (2004), *Landscapes of Exposure*. (selected essays TBA)
Assignment: Follow the instructions for the “summary/review assignment” (see above).

Week 16 (December 7)

This week’s class will be devoted to going over students’ final projects.