

**University of Wisconsin-Madison**  
**HISTORY OF SCIENCE 623**  
**Studies in Early Modern Science**

Spring 2021 (online)

1 credit

3:30–4:25 PM (Wednesdays)

Florence Hsia

[12:00–2:00 pm Thursday](#) & by appt.  
608-262-1044 | [florence.hsia@wisc.edu](mailto:florence.hsia@wisc.edu)

**Zoom office hours**

Robin Rider

[11:30 am–12:30 pm](#) Tues. & by appt.  
608-262-2809 | [robin.rider@wisc.edu](mailto:robin.rider@wisc.edu)

**outcomes**

Students taking this course will gain familiarity with some major trends in recent literature on history of early modern science, understand significant concepts and interventions raised, and develop their own perspectives on relevant interpretative and methodological issues.

**requirements & grading**

This 1-credit course meets as a group for 1 hour per week (online synchronous). You can expect to spend an average of at least 2 hours outside of class for every hour in the classroom. Plan to give an average of 2–3 hours per week to reading, writing, preparing for discussions, and/or studying for exams for this course. To make the most of your time in class, complete the readings assigned for each class meeting before coming to class. Bring the readings with you to all class meetings.

You'll be asked to take turns presenting the materials assigned for HS 623 (the number of presentations will depend on the number of course participants). A typed summary/critique (1 page in length) should accompany each of your presentations. Please provide copies of your 1-page summary/critique to all course participants.

Normally students should co-enroll in History of Science/History 323 (Scientific Revolution). In lieu of the graded assignments for HS/Hist 323, you should complete 15–20 pages of prose writing in connection with this course. This can take the form of a research paper, based on primary sources; a critical discussion of some historiographical issue in the secondary literature; two or more book reviews (situate the book with respect to existing scholarship and critique the author's use of source material); or a bibliographic survey in preparation for a prelim field. Please meet with us as early as you can in the semester to discuss how you propose to fulfill the writing requirement.

You should be prepared to present a prospectus and preliminary bibliography to the group on **March 24**. We will discuss written work-in-progress on **April 28**. All of your written work is due **May 5** (Wednesday) by 10:00 am. Grading will be based on class participation (~25%), presentations (~25%), and the written work (50%).

**SCHEDULE OF MEETINGS & ASSIGNMENTS**

All readings marked with asterisks can be accessed online via the UW–Madison library catalog.

- Jan 27 (W)     **introductions**
- Feb 3           **mastering narratives**  
Margaret J. Osler, "The canonical imperative," in *Rethinking the scientific revolution*, ed. by Osler, Cambridge: Cambridge University Press, 2000, 1–22  
\*Shank, J.B. "Special issue: After the Scientific Revolution: thinking globally about the histories of the modern sciences." *Journal of early modern history* 21.5 (2017): 377-93.
- Feb 10          **visualizing science**  
\*Anita Guerrini, "The king's animals and the king's books: the illustrations for the Paris Academy's *Histoire des animaux*," *Annals of science* 67.3 (2010): 383-404  
\*Lorraine Daston, "Super-vision: weather watching and table reading in the early modern Royal Society and Académie royale des sciences," *Huntington Library quarterly* 78, no. 2 (2015): 187–215
- Feb 17          **shifting paradigms**  
\*Kathleen Crowther, Ashley Nicole McCray, Leila McNeill, Amy Rodgers, and Blair Stein, "The book everybody read: vernacular translations of Sacrobosco's *Sphere* in the sixteenth century," *Journal for the history of astronomy* 46.1 (2015): 4–28  
Owen Gingerich, *An annotated census of Copernicus' De revolutionibus (Nuremberg, 1543 and Basel, 1566)*, Leiden; Boston: Brill, 2002, ix-xxxi  
\*Robert S. Westman, "The Melanchthon circle, Rheticus, and the Wittenberg interpretation of the Copernican theory," *Isis* 66.2 (1975): 164–93
- Feb 24          **material matters 1**  
\*Elaine Leong, "Papering the household: paper, recipes, and everyday technologies in early modern England," in *Working with paper: gendered practices in the history of knowledge*, ed. by Carla Jean Bittel, Elaine Leong, and Christine von Oertzen, Pittsburgh: University of Pittsburgh Press, 2019, 32–45  
\*Marta Hanson and Gianna Pomata, "Medicinal formulas and experiential knowledge in the seventeenth-century epistemic exchange between China and Europe," *Isis* 108.1 (2017): 1–25  
\*Hjalmar Fors, Lawrence M. Principe, and H. Otto Sibum, "From the library to the laboratory and back again: experiment as a tool for historians of science," *Ambix* 63.2 (2016): 85–97
- March 3         **material matters 2**  
\*Meghan C. Doherty, "Discovering the 'true form:' Hooke's *Micrographia* and the visual vocabulary of engraved portraits," *Notes & records* 66.3 (2012): 211–34  
\*Mary Learner, "Embroidering the new science: seventeenth-century florilegia and botanical study," *Nuncius* 35.3 (2020): 685–717  
\*Didi van Trijp, "Fresh fish: Observation up close in late seventeenth-century England," *Notes and records* (2020)

March 10

**Galileo's O**

\*Paul Needham, "Fruitful doubts, May–June 2012," in *A Galileo forgery: unmasking the New York Sidereus Nuncius* [= vol. 3 of *Galileo's O*], ed. by Horst Bredekamp, Irene Brückle, and Paul Needham, Berlin, Boston: De Gruyter, 2014, 15–24

\*Nick Wilding, "Forging the moon," *Proceedings of the American Philosophical Society* 160.1 (2016): 37–72

Joseph A. Dane, *What is a book?: the study of early printed books*, Notre Dame, Indiana: University of Notre Dame Press, 2012, 203–28 [pp. 203–210 is already assigned in HS 323]

Wilding's reviews of *Galileo's O* (vols. 1–2, 2011; vol. 3, 2014)

\*Nick Wilding, "Irene Brückle, Oliver Hahn, and Horst Bredekamp, eds., *Galileo's Sidereus nuncius: a comparison of the proof copy (New York) with other paradigmatic copies* [vol. 1]; Paul Needham, *Galileo makes a book: the first edition of Sidereus nuncius, Venice 1610* [vol. 2]," *Renaissance quarterly* 65.1 (2012): 217–18

\*Nick Wilding, "Letter to the editor," *Isis* 103.4 (2012): 760

\*Nick Wilding, "Horst Bredekamp, Irene Brückle, and Paul Needham, eds., *A Galileo forgery: unmasking the New York Sidereus nuncius* [vol. 3]," *Renaissance quarterly* 67.4 (2014): 1337–40

March 17

**rethinking religion**

John L. Heilbron, "Science in the church," *Science in context* 3.1 (1989): 9–28

\*Gary A. Abraham, "Misunderstanding the Merton thesis: a boundary dispute between history and sociology," *Isis* 74.3 (1983): 368–87

\*Luís Tirapicos, "On the censorship of Tycho Brahe's books in Iberia," *Annals of science* 77.1 (2020): 96–107

**March 22 (M)**

please email your materials to all seminar participants

**March 24 (W)**

discussion of prospectus & preliminary bibliography

March 31

**making facts**

Lorraine Daston, "The language of strange facts in early modern science," in *Inscribing science: scientific texts and the materiality of communication*, ed. by Timothy Lenoir, Stanford: Stanford University Press, 1998, 20–38 plus endnotes

\*Steven Shapin, "Pump and circumstance: Robert Boyle's literary technology," *Social studies of science* 14.4 (1984): 481–520

April 7

**networks & communities**

\*Simon Schaffer, "Newton on the beach: the information order of *Principia Mathematica*," *History of science* 47.3 (2009): 243–76

\*Steven J. Harris, "Long-distance corporations, big sciences, and the geography of knowledge," *Configurations* 6.2 (1998): 269–304

\*Mary Terrall, "Gendered spaces, gendered audiences: inside and outside the Paris Academy of Sciences," *Configurations* 3.2 (1995): 207–32

April 14

**globalizing the Scientific Revolution**

\*Giovannetti-Singh, Gianamar. "Galenizing the New World: Joseph-François Lafitau's 'Galenization' of Canadian ginseng, CA 1716–1724." *Notes and records* (2020)

Carla Nappi, "Surface tension: objectifying ginseng in Chinese early modernity," *Early modern things: objects and their histories, 1500-1800*, ed. by Paula Findlen, London; New York: Routledge, 2013, 31-52

\*Christopher M. Parsons, "The natural history of colonial science: Joseph-François Lafitau's discovery of ginseng and its afterlives," *William and Mary quarterly* 73.1 (2016): 37-72

April 21

no meeting

**April 26 (M)**

please email your materials to all seminar participants

**April 28 (W)**

discussion of drafts

**May 5\***

all written work due May 5 (Wednesday) by 5:00 pm