History 328 – Science in American Culture: The Visual Culture of Science in the Nineteenth-century United States
Cross-listed with Art History 487 – Special Topics in Modern Art

Instructor: Dr. Michelle Smiley
Office hours: Thu 4:30-5:30 & by appt on Zoom
Class: Tu/Th 2:50-4:10
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Frederic Edwin Church, *Heart of the Andes*, 1859.

**Course Description**

In what ways do pictures shape our understandings of scientific ideas and culture? What objects and actors are typically understood as “scientific” and how might a view of science as visual and aesthetic expand such definitions? This course will take a capacious view of nineteenth-century scientific practice in the United States and wider Atlantic world between 1790 and 1860 with an emphasis on its material, visual, and aesthetic aspects. Where received knowledge tells us that the nineteenth-century saw the birth of modern science as the objective observation of universal truths, we will seek to complicate such assumptions through an examination of paintings, photographs, performances, and everyday practices as dynamic and decentralized sites of knowledge-making. Starting from the premise that art and science are less opposites than interwoven practices, we will explore themes such as 1) the role of settler colonialism in the production of knowledge, 2) understandings of “objectivity” and their limitations, 3) the rise of the invisible as a site of technoscientific investigation. Artworks to be discussed may include Frederic Edwin Church’s *The Heart of the Andes*, the daguerreotype collection of Louis Agassiz, and Adam and Zack Khalil’s *INAATE/SE*; readings include texts by Frederick Douglass, Michel Foucault, Edouard Glissant, Katherine McKittrick, and Kathryn Yusoff.

**Please note: this class will be taught in a hybrid asynchronous and synchronous format; syllabus subject to change**
Requirements
Formal analysis assignment 5%
Discussion facilitation 10%
Asynchronous & synchronous participation 30%
Creative map assignment 15%
Paper Proposal & bibliography 10%
Final paper oral presentation 5%
Final research paper (7-9 pp) 25%

Note on participation and responsibility
Participation grades are based on the following: 1) attendance at synchronous meetings; 2) participation in synchronous meetings and via reading responses, both quantity and quality; 3) final oral presentation. This is an upper division seminar: a high level of participation is mandatory whether via synchronous class discussion or asynchronous writing responses. **This course includes difficult imagery and materials. It is your responsibility to review the syllabus and determine whether the course is appropriate for you before final enrollment.** Students who anticipate a problem with the course, regardless of the reason, should contact me during the first week to determine whether you should enroll in an alternate course.

Academic Honesty and Plagiarism Policy
All written work submitted by students should be their own. Students should be careful when distinguishing their own ideas and writings from other sources. Plagiarism includes quoting or paraphrasing from another source without properly citing it. Plagiarism is grounds for automatically failing the course. For further details: [http://academicintegrity.rutgers.edu/policy-on-academic-integrity](http://academicintegrity.rutgers.edu/policy-on-academic-integrity)

Note on accommodations for students with disabilities
Students who think they may need accommodations in this course because of the impact of a disability are encouraged to meet with me early in the semester. Students should also contact Disability Services as soon as possible, to verify their eligibility for reasonable accommodations. For more information, see [http://robeson.rutgers.edu/studentlifedisability.html](http://robeson.rutgers.edu/studentlifedisability.html)

Remote Education Plan
For each scheduled class day, you should follow the schedule of readings (below) carefully. There will always be an assigned reading, and there will frequently be either a taped statement by the instructor or some other assigned media unit (a podcast, film, etc.). At the beginning of each week, the instructor will upload a collection of images and frequently a (short) taped lecture to provide historical context for the assigned themes. A major component of the course will include short written responses. On the Thursday of each week one student (or a group of students) will be assigned as discussion facilitators. In your week as a facilitator you will be responsible for generating questions and group exercises that relate to and expand upon the week's assigned readings. Your classmates will then respond to your questions via the Canvas discussion board and you will be responsible for responding to these comments and drawing out themes from your
classmates’ thoughts. In some weeks students will also have the option of running a group meeting via Zoom in lieu of a discussion board. This forms the “asynchronous” portion of the course. Each Tuesday meeting will entail a “synchronous” course with the instructor present, including Zoom meetings with the entire class and smaller meetings between students.

**Learning Goals**

- Develop knowledge of histories of nineteenth-century science and their intersections with critical theories of science, technology, and aesthetics
- Develop ability to think, speak, and write critically, clearly, and intelligently about difficult visual imagery and historical phenomena
- Develop research skills and the ability to synthesize critical viewpoints and theories, as demonstrated in reading responses and final paper
- Develop oral and audio-visual presentation and argument skills, as demonstrated in reading responses, synchronous participation, creative map assignment, discussion responses and final presentations

**Schedule of Readings & Assignments**

**Week 1: Introduction: Science & Empire**

**Tu 1/19**
Introduction to the Course

**Synchronous meeting**

**Th 1/21**

**Asynchronous breakout rooms**

**Week 2: Taxonomy: Natural History in Early America**

**Tu 1/26**

**Synchronous meeting**

**Discussion assignment**

**Week 3: The Mechanical Universe: Objectivity & the Waning Enlightenment**


**Synchronous meeting**


**Discussion assignment**

**Week 4: Plantation Epistemes**


**Synchronous meeting**


**Discussion assignment**

**Week 5: Alexander von Humboldt: Landscapes and Instruments**


**Synchronous meeting**


Explore online SAAM [lectures](https://manpodcast.com/portfolio/no-445-humboldt-and-the-united-states/) and [Humboldt exhibition](https://manpodcast.com/portfolio/no-445-humboldt-and-the-united-states/)

**Discussion assignment**
Week 6: Mapping

Synchronous meeting

Watch: https://emergencemagazine.org/story/counter-mapping/

Asynchronous breakout rooms

Week 7: Collecting and Exhibiting
Tu 3/2  Potpourri: A variety of essays will be uploaded to the Canvas site, each of which discusses a different aspect of collecting, museums, and exhibition in the nineteenth-century United States. Themes include the rise of commercial orientalism, Peale’s Philadelphia Museum, and even the frozen time of preserved butterfly specimens. Pick one (or more!) and come prepared to discuss your chosen reading with your colleagues!
Some of the readings options will include:
And more!

Synchronous meeting


Discussion assignment

Week 8: Doing Indigenous Knowledge

Synchronous meeting


Mapping assignment due
Asynchronous breakout rooms

Spring Break: no class
**Week 9: Rocks**

Tu 3/23  Kathryn Yusoff, *A Billion Black Anthropocenes or None* (University of Minnesota Press, 2018), excerpts.  
Guest speaker: Dr. Dana Luciano  
**Synchronous meeting**

**Asynchronous breakout rooms**  
Proposals for final paper topics due

**Week 10: Racial Science**

Tu 3/30  Ann Fabian, “Crania Americana,” in *The Skull Collectors: Race, Science, and America’s Unburied Dead* (University of Chicago Press, 2010), 79-120;  
**Synchronous meeting**

Frederick Douglass, “The Claims of the Negro, Ethnologically Considered,” 1854.  
**Discussion assignment**

**Week 11: Instruments & Imponderables**

**Synchronous meeting**

**Discussion assignment**

**Week 12: Undoing Imperial Science**

Explore: [https://decolonizethisplace.org/](https://decolonizethisplace.org/)  
**Synchronous meeting & final paper discussion**
Th 4/15
Watch: Adam and Zack Khalil, *The Violence of a Civilization Without Secrets*: https://vimeo.com/217342747 (10min) and INAATE/SE/ [it shines a certain way. to a certain place./ it flies. falls./] (1hr 8min)
Synchronous meeting & final thoughts

Week 14: Student presentations
Tu 4/20  Group A presentations via Zoom
Synchronous meeting

Th 4/22  Group B presentations via Zoom
Synchronous meeting

Week 13: Student presentations
Tu 4/27  Group C presentations via Zoom
Synchronous meeting

Th 4/29  Group D presentations via Zoom
Synchronous meeting

Final paper: due 5/1 via email