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HIST 365-001: Science and Technology in the Global South

Rosanna Dent

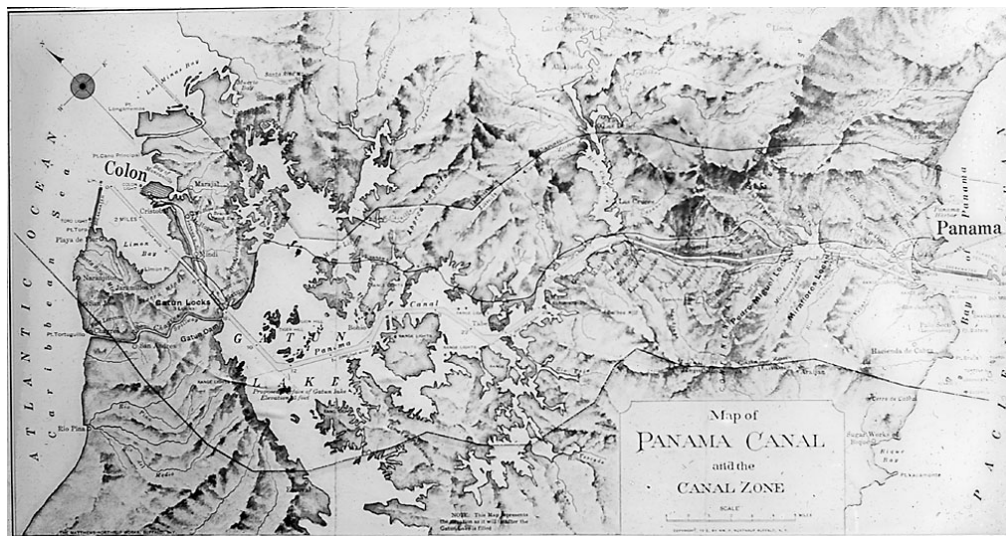
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HIST 365: Science and Technology in the Global South



A map of the Panama Canal, ca. 1900—1914. (National Archives, [106-RC-129](#))

Class Time & location	Tuesdays and Thursdays, 12:30 - 13:50 Synchronous, Online on WebEx
Instructor	Rosanna Dent
Pronouns	She/her/hers
E-mail	rdent@njit.edu
Office	https://njit.webex.com/meet/rdent
Office Hours	Tuesday 17:30-18:30; Thursday 14:00-15:00 and by appointment. Please sign up on my Google Cal to assure a spot.
Overview	This course explores the history of science and technology in the Global South. We will examine how technical and scientific knowledge has been made, circulated, and used to various ends, with particular attention to colonial and postcolonial dynamics. Working with case studies from Latin America, Africa, and Asia spanning the period from 1500 to the late twentieth century, this course examines colonial exploration and extractivism, classification, race-making and race relations, infrastructure and transportation, economic development, architecture and design. We will look at science and technology as they relate to the exercise of power by colonizing forces, nationalist projects, and the people subjected to and resistant of this power.

Prerequisites | This course may be used to satisfy a three credit 300 level GER in History and Humanities. A grade of C or better in [HUM 101](#), [HUM 102](#) and a 200 level Humanities or History course or their equivalents.

Course Goals | Students who successfully complete this course will be able to:

- Raise pertinent questions regarding the political and social implications of science and technology in the Global South;
- Identify and summarize the main idea and key arguments of a textual source;
- Critically evaluate a source (whether primary or secondary), situating it in its historical context and interpreting its broader relevance for historical thinking;
- Communicate summaries, questions, and analyses in clear written and oral form;
- Demonstrate information literacy by selecting, using, and citing appropriate source material;

Readings | All required readings will be available online on Canvas.

WebEx Class Meetings | Our class will meet synchronously at our scheduled time through WebEx. In-class participation matters, and we will make it as interactive as possible given the medium. I also recognize we are living in uncertain times. I will take attendance so I can follow-up with students who miss class. I will also make and post recordings of class to Canvas.

Please mute yourselves when not speaking. Sharing video is strongly encouraged if bandwidth permits as it will provide us with more visual cues and a better sense of who we are thinking with. For privacy concerns, this [guide](#) explains how to put up a virtual background in WebEx.

Classroom recordings of students are educational records under the Family Educational Rights and Privacy Act (FERPA), the U.S. federal law that governs access to educational records. Both instructor and students must provide notification if any part of online sessions are to be recorded, and such recordings cannot be circulated outside the course.

Academic Integrity | NJIT's policy is as follows: "Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the university. Cheating is strictly prohibited and devalues the degree that you are working on. As a member of the NJIT community, it is your responsibility to protect your educational investment by knowing and following the academic code of integrity policy that is found at: <http://www5.njit.edu/policies/sites/policies/files/academic-integrity-code.pdf>.

Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. **Any student found in violation of the code by cheating, plagiarizing or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university.** If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at dos@njit.edu."

Most importantly, you are here to learn, grow, practice, make mistakes, exchange ideas, take risks, debate, discuss, and so on. **Academic integrity is about being committed to these learning processes and taking responsibility for your own learning.** I am here to answer questions and help with this process. If in doubt, ask.

Citation Expectations

Scholars communicate their intellectual connections through citation. This is a **generative practice** that allows you to join a broader conversation with those you read and those who read you. It is also a way to **credit others** for their work.

Any words taken directly from a written source (assigned reading, website, book, article...) or from another individual (interview, podcast, youtube...) must be in quotation marks and cited. ALWAYS. I will work with you to learn how to do this. This matters a lot, both to **avoid plagiarism** and to **learn how research works**.

In this class we will use Chicago Manual of Style format for citations. Davida Scharf is an expert researcher and our librarian for the History Department. Online research guides, office hours or other help: <http://researchguides.njit.edu/scharf>.

Disability Services

Students who have special needs should contact NJIT's Student Disability Services to help procure accommodations in completing coursework. The center can be found at <http://www.njit.edu/counseling/services/disabilities.php>.

University Education in Pandemic Times

Even if we may be more used to online interactions, social distancing, and life-through-masks than a few months ago, these are still stressful and uncertain times. We are facing many serious issues that will impact different members of our class differently, including COVID-19, but also racism, state violence, climate change, and a highly charged political climate. Part of what we will do in this class is learn about the historical roots of many of the problems we now face.

For some of us this is the first semester that we have studied (or taught) in the online format, so there will be a steep learning curve. Please be compassionate to others who may be facing different challenges from you. Make an extra effort to get to know your classmates. Read, discuss, and work together if you can.

If you are struggling with the course for whatever reason, please contact me. I may be able to help. I want you to succeed and will help you do so. I also strongly encourage students to seek support in different forms, including from the Center for Counseling and Psychological Services, and Health Services depending on the challenge.

Furthermore, I urge any student who faces challenges securing food or housing and believes this may affect their learning to contact the Dean of Students. And let me know if you're comfortable doing so, because there are ways I may be able to help.

Note: I reserve the right to make changes to the syllabus that I deem necessary.

Assignments and Grading

Please prepare all assignments in Times New Roman, size 12 font, with 1-inch margins, double spaced.

Submission: All assignments should be submitted electronically through canvas. Only the following file types are accepted: pdf, doc, docx. (I.e. Google docs are not accepted – please make a pdf.) Late submission may result in a loss of points.

Golden Ticket: Life can be complicated for all of us at times. All students have one “Golden Ticket,” which can be used for a no-questions-asked 3-day extension on one major assignment. Simply indicate at the top of the first page that you are using your Golden Ticket, and you will not be marked down.

Exceptional Circumstances: If there are medical, family, or other pressing issues affecting your ability to complete class work, please get in touch with me. I can help most effectively if you contact me early. I also strongly encourage you to reach out proactively to the Dean of Students’ office.

Participation	(40%)	Grading Scale
Midterm Exam #1	(15%)	A= 90 to 100
Primary Source Essays (2)	(30%)	B+= 88 to 89
Midterm Exam #2	(15%)	B= 80 to 87
		C+= 78 to 79
		C= 69 to 77
		D= 60 to 69
		F= 59 to 0

Participation (40%)

Attendance and participation are central to your success in this course. Participation includes speaking, listening, and demonstrating careful preparation for class including completing all assigned reading. Full participation in this class includes:

- All students will be required to post a 250-word (approximately) **response to the readings** on Canvas by **10:00 on Tuesday** (unless otherwise noted). I will post a prompt and guidelines for the response each week by Friday at 17:00. These responses should demonstrate both comprehension and critical thinking about the readings. Strive to be thoughtful and thought provoking. Pose questions. Responses will be graded on a check, check-plus, check-minus scale. Students can drop their two lowest reading response grades. (25% of final grade.)
- In-class participation** can take many forms, such as speaking during full-class discussion, group work and leadership during class activities, pre-prepared questions or comments, in-class writing assignments, among other options. If you tend to be shy or quiet in class I encourage you to talk to me about it early in the semester. (10% of final grade.)
- Effective education depends on **critical consideration** of your own learning. Over the semester you will write **three reflexive letters** to me considering your growth in the context of the course. (5% of final grade.) (Deadlines: Sun. Sep. 6; Thurs. Oct. 22; Thurs. Dec. 3.)
- All students **must attend office hours** or meet with me by appointment at least once during the first six weeks of the semester.

2 Midterm Exams (30% total) (Thurs. Oct. 8; Sat. Dec. 12)

The midterms will be take home exams comprised of short answer and essay questions. They will be designed to help you think synthetically. All assigned material and class discussions are fair game.

Panama Canal Primary Source Analyses (30%)

Together in this course we will be building a website of annotated primary sources that will allows us to explore the fascinating history of the Panama Canal, including everything from the history of yellow fever control, to US imperialism in the isthmus, to the politics of concrete.

Part of your grade will be based on your identification of two interesting primary sources for the class project. For each, you will write a short essay that explores the source in relation to the key questions of the course and the secondary sources that we read together about the canal.

Rough Draft #1 and peer editing (due Thurs. Nov. 12) (5%)

Rough Draft #2 and peer editing (due Tues. Nov. 24) (5%)

Final Drafts (due Tues. Dec. 15) (20%)

Schedule of Topics and Assigned Readings

Week 1	<p>Introduction</p> <p>Secondary Source: Optional: Basalla, George. 1967. "The Spread of Western Science." <i>Science</i> 156 (3775): 611–22. https://doi.org/10.1126/science.156.3775.611. [11 pages]</p> <p>Tues, Sep. 1 "The Spread of Western Science?"</p> <p>Thurs, Sep. 3 <i>What is the Global South?</i> **No reading response required this week** **Reflexive letter #1 due Sunday, Sep. 6**</p>
Week 2	<p>North, South, East, West: Orientations</p> <p>Secondary Sources: Lasso, Marixa. 2019. "Introduction" in <i>Erased: The Untold Story of the Panama Canal</i>, 1-20. Cambridge: Harvard University Press. [20 pages] Fan, Fa-ti. "The Global Turn in the History of Science." <i>East Asian Science, Technology and Society: An International Journal</i>, 6 (2012): 249-258. [10 pages]</p> <p>Optional: Norton, Marcy. 2017. "Subaltern Technologies and Early Modernity in the Atlantic World." <i>Colonial Latin American Review</i> 26 (1): 18–38; read 25-31. https://doi.org/10.1080/10609164.2017.1287322. [6 pages]</p> <p>Tues, Sep. 8 <i>NO CLASS MEETING: Monday Schedule</i></p> <p>Thurs, Sep. 10 <i>Fire, Chocolate, and Other Technologies</i> **Note: reading response due Thursday**</p> <p>NOTE: Tuesday September 8th is the last day to add or drop a course.</p>
Week 3	<p>Colonial Origins</p> <p>Secondary Sources: Parrish, Susan Scott. 2007. "Diasporic African Sources of Enlightenment Knowledge." In <i>Science and Empire in the Atlantic World</i>, edited by James Delbourgo and Nicholas Dew, 281–310. New York: Routledge. [29 pages]</p> <p>Primary Source: Sweet, James H. 2013. <i>Domingos Alvares, African Healing, and the Intellectual History of the Atlantic World</i>. Chapel Hill: University of North Carolina Press, 172-176. [5 pages]</p>

Tues, Sep. 15	<i>Go-betweeners</i>
Thurs, Sep. 17	<i>Indigenous Knowledges</i>
Week 4	Maps as Immutable Mobiles
	<p>Secondary Sources:</p> <p>Safier, Neil. 2008. "An Enlightened Amazon, with Fables and a Fold-Out Map." In <i>Measuring the New World: Enlightenment Science and South America</i>, 57–92. Chicago: University of Chicago Press. [Selection]</p> <p>Hostetler, Laura. 2000. "Qing Connections to the Early Modern World: Ethnography and Cartography in Eighteenth-Century China." <i>Modern Asian Studies</i> 34 (3): 623–62. [39 pages]</p> <p>Primary Source: Selected Maps</p>
Tues, Sep. 22	<i>Constructing States</i>
Thurs, Sep. 24	<i>Constructing Empires</i>
Week 5	The Order of Things
	<p>Secondary Sources:</p> <p>Foucault, Michel. 1994 [1966]. "Preface" in <i>The Order of Things: An Archaeology of the Human Sciences</i>. New York: Vintage, xv-xxiv. [10 pages].</p> <p>Heaney, Christopher. 2018. "How to Make an Inca Mummy: Andean Embalming, Peruvian Science, and the Collection of Empire." <i>Isis</i> 109 (1): 1–27. https://doi.org/10.1086/697020. [Selection]</p> <p>Primary Source: Garcilaso de la Vega, 1989 [1966]. <i>Royal Commentaries of the Incas, and general history of Peru, Book One</i>, trans. Harold V. Livermore. Austin: University of Texas Press. 306-308. [Book Five, Chapter XXIX] [3 pages]</p>
Tues, Sep. 29	<i>Collection and Classification</i>
Thurs, Oct. 1	<i>Circulating and Constructing</i>
Week 6	Midterm #1
Tues, Oct. 6	In-class Review for Midterm
Thurs, Oct. 8	No Class: Take-home Midterm due 11:59pm

<p>Week 7</p> <p>Tues, Oct. 13</p> <p>Thurs, Oct. 15</p>	<p>People and Places on Display</p> <p>Secondary Sources: Qureshi, Sadiyah. 2004. "Displaying Sara Baartman, the 'Hottentot Venus.'" <i>History of Science</i> 42 (2): 233–57. https://doi.org/10.1177/007327530404200204. [25 pages] Moore, Taylor. "An (Un)Natural History: Tracing the Magical Rhinoceros Horn in Egypt." Forthcoming. [27 pages]</p> <p>Primary Source: Rhinoceros Horn Amulet</p> <p><i>The Gender of Collecting</i></p> <p><i>Collecting and Displaying People</i></p>
<p>Week 8</p> <p>Tues, Oct. 20</p> <p>Thurs, Oct. 22</p>	<p>Speed and Travel</p> <p>Secondary Sources: Kerr, Ian J. 2007. <i>Engines of Change: The Railroads That Made India</i>. Westport, Conn: Praeger. Selection. Seow, Victor. 2019. "Sites of Extraction: Perspectives from a Japanese Coal Mine in Northeast China." <i>Environmental History</i> 24 (3): 504–13. https://doi.org/10.1093/envhis/emz006. [9 pages]</p> <p>Optional: Morus, Iwan Rhys. 2000. "'The Nervous System of Britain': Space, Time and the Electric Telegraph in the Victorian Age." <i>The British Journal for the History of Science</i> 33 (4): 455–75. https://doi.org/10.1017/S0007087400004210. [20 pages]</p> <p><i>Shrinking Time and Space</i></p> <p><i>Imperial Power, Subaltern Resistance</i> **Reflexive letter #2 due**</p>
<p>Week 9</p> <p>Tues, Oct. 27</p> <p>Thurs, Oct. 29</p>	<p>Modernism and Modernity</p> <p>Secondary Sources: López-Durán, Fabiola. 2018. "Picturing Evolution: Le Corbusier and the Remaking of Man." In <i>Eugenics in the Garden: Transatlantic Architecture and the Crafting of Modernity</i>, 144–88. Austin: University of Texas Press. [44 pages]</p> <p>Primary Sources: Pedrosa, Andriano and Fernando Oliva. 2019. <i>Tarsila do Amaral: Cannibalizing Modernism</i>. São Paulo: MASP. [Selected paintings]</p> <p><i>Eugenics in the Global South</i></p> <p><i>The Cannibalistic Manifesto</i></p>

<p>Week 10</p> <p>Tues, Nov. 3</p> <p>Thurs, Nov. 5</p>	<p>Imperial Technologies and “Development”</p> <p>Secondary Sources: Mitchell, Timothy. 2002. “Can the Mosquito Speak?” In <i>Rule of Experts: Egypt, Techno-Politics, Modernity</i>, 19–53. Berkeley: University of California Press. [34 pages] Maurer, Noel, and Carlos Yu. 2010. <i>The Big Ditch: How America Took, Built, Ran, and Ultimately Gave Away the Panama Canal</i>. Princeton: Princeton University Press. [Selection]</p> <p>Primary Source: TBD</p> <p><i>Technology and War</i></p> <p><i>Development and Dependence</i></p>
<p>Week 11</p> <p>Tues, Nov. 10</p> <p>Thurs, Nov. 12</p>	<p>Race and Labor</p> <p>Secondary Sources: Greene, Julie. 2010. <i>The Canal Builders: Making America’s Empire at the Panama Canal</i>. Penguin Books. [Selections]</p> <p>Primary Source: TBD</p> <p><i>Race and the Valuation of Life</i></p> <p><i>Laboring for Progress</i></p> <p>**Primary Source Analysis Rough Draft 1 Due**</p> <p>NOTE: Monday November 9th is the last day to withdraw from a course.</p>
<p>Week 12</p> <p>Tues, Nov. 17</p> <p>Thurs, Nov. 19</p>	<p>Canal Fever</p> <p>Secondary Sources: Sutter, Paul. 2016. “‘The First Mountain to Be Removed’: Yellow Fever Control and the Construction of the Panama Canal.” In Ashley Carse et al., “Panama Canal Forum: From the Conquest of Nature to the Construction of New Ecologies.” <i>Environmental History</i> 21 (2): 206–87. https://doi.org/10.1093/envhis/emv165.</p> <p><i>Medicine and Progress</i></p> <p><i>Virtual Visit to the NY Academy of Medicine Library (TBC)</i></p>

<p>Week 13</p> <p>Tues, Nov. 24</p> <p>Thurs, Nov. 26</p>	<p>Conquest and Construction of Nature</p> <p>Secondary Sources: Carse, Ashley. 2014. <i>Beyond the Big Ditch: Politics, Ecology, and Infrastructure at the Panama Canal</i>. Cambridge: The MIT Press. [Selections]</p> <p><i>Nature vs. Infrastructure</i> **Primary Source Analysis Rough Draft 2 Due**</p> <p>Thanksgiving **no class**</p>
<p>Week 14</p> <p>Tues, Dec. 1</p> <p>Thurs, Dec. 3</p>	<p>Displacement</p> <p>Secondary Sources: Lasso, Marixa. 2019. <i>Erased: The Untold Story of the Panama Canal</i>. Cambridge: Harvard University Press. [Selection]</p> <p><i>Erased</i></p> <p><i>Who gets to tell history?</i> **Reflexive Letter #3 Due**</p>
<p>Week 15</p> <p>Tues, Dec. 8</p> <p>Thurs, Dec. 10</p> <p>Fri, Dec. 11</p> <p>Tues, Dec 15</p>	<p><i>Course Wrap Up</i></p> <p>Review for Midterm #2</p> <p>Midterm #2 Due (11:59pm)</p> <p>Final Primary Source Analyses (2) Due (11:59pm)</p>