HIST XXX

**Engineering the Global Middle East**

**Energy, Agriculture, Infrastructure**

An Undergraduate Lecture/Seminar Class

Spring 2020

Wednesday-Friday: 8:30-9:45

Room:

Professor: Adam Mestyan

Office: 318, Classroom Building (East Campus)

Office Hours: Wednesdays 10–11 am or by appointment

Email: [adam.mestyan@duke.edu](mailto:adam.mestyan@duke.edu)

COURSE OBJECTIVES

This class is a global techno-environmental history, with a special emphasis on the modern Middle East. Our readings focus on the interaction between humans and nature through technology. We interrogate the many ways in which the transformation of nature and transfer of technologies has rearranged political relations within and between states in the last two hundred years. We shall survey the social history of technology, of engineering, infrastructural developments, urbanization, and energy resources. The questions include how new technologies changed social practices, how new technological expertise relates to power, the emergence of global energy regimes, whether automatization contributes to inequality, whether local (de-)industrialization creates global dependence, and how industry co-exists with agricultural regimes in the contemporary Middle East.

Project:

The class is part of the MicroWorlds Lab, and we shall have meetings in the Lab. We study and practice research skills, through the lenses of environmental history, science and technology studies (STS) using the methods of microhistory. There will be either individual or group research projects during the entirety of the class. The project will be the subject of the final paper which should be presented in the final week. Topics may include: the historical development of an industrial/infrastructural domain in a Middle Eastern country; the history of a US company or companies which actively invested in technology in the Middle East; one huge infrastructural development project (for instance, dams, airports, a new city); or the microhistory of an institution in a sector (for instance, an oil pipeline); or urban history within one location (construction of streets, buildings, etc), or the historiography of one problem. The student or the group may conduct directed research in the online press and online archives (in English, or if you can, in one of the languages of the region).

COURSE STRUCTURE

Chronologically, the course is divided into three sections: an introductory theory part, the age of European political imperialism (c. 1850-1950), and the age of US energy imperialism (c. 1950-). There are two meetings every week: the first class is a lecture and general introduction into one topic about technology and environmental history, and the second class is about specific case studies in Middle Eastern history or a lab meeting. Classes are heavily discussion-focused, based on the readings. Readings are around 80-100 pages per week. On the other hand, super interesting texts.

We will host professors invited to give guest talks and we may also have an excursion to Duke Energy plant.

Books for Book reviews

All readings are available in Sakai. The following six books are extra readings and you have to choose two and write a book review about each. Requirements: 2 pages maximum, using 12 pt., double spaced, Times New Roman font, and standard margins. I expect intelligent reading: identify and describe the argument and the evidence. Papers should be saved as PDF files and sent to me as an email attachment to: [adam.mestyan@duke.edu](mailto:adam.mestyan@duke.edu). The first is due by noon on 29 January and the second is by noon March 26.

Derr, Jennifer. *The Lived Nile: Environment, Disease, and Material Colonial Economy in Egypt*(Stanford: Stanford University Press, 2019).

Elvin, Mark. *The Retreat of the Elephants: An Environmental History of China*. Yale University Press, 2006.

Hecht, Gabrielle. [*The Radiance of France: Nuclear Power and National Identity after World War II*](https://web-b-ebscohost-com.proxy.lib.duke.edu/ehost/ebookviewer/ebook/bmxlYmtfXzE1NF9fQU41?sid=fbf3819b-4ccb-4f7e-bf86-af0e1b377975@sessionmgr101&vid=2&format=EB&rid=1) (Cambridge, Mass.: The MIT Press, 1998).

Levinson, Marc. [*The Box: How the Shipping Container Made the World Smaller and the World Economy Bigger - Second Edition*](https://www-degruyter-com.proxy.lib.duke.edu/viewbooktoc/product/475378) (Princeton: Princeton University Press, 2016).

McNeill, John Robert, and Peter Engelke. [*The Great Acceleration: An Environmental History of the Anthropocene since 1945*](https://www-degruyter-com.proxy.lib.duke.edu/viewbooktoc/product/473020) (Cambridge, MA: Belknap Press of Harvard University Press, 2016).

Ross, Corey. [*Ecology and Power in the Age of Empire - Europe and the Transformation of the Tropical World*](http://proxy.lib.duke.edu/login?url=http://dx.doi.org/10.1093/acprof:oso/9780199590414.001.0001) (Oxford: Oxford University Press, 2017).

Professional websites:

American Society for Environmental History: <https://aseh.net/>

International Society for the History of Technology: <https://www.historyoftechnology.org/>

EVALUATION

The final grade is composed of three components:

1) *Participation in class.* Students are expected to: attend all classes (attendance will be taken); complete the readings **before** the class meeting for which it is assigned; and participate actively and respectfully in class discussions.

2) *Two book reviews* (3 pages maximum, using 12 pt., double spaced, Times New Roman font, and standard margins). Papers should be saved as PDF files and sent to me as an email attachment to: ([adam.mestyan@duke.edu](mailto:adam.mestyan@duke.edu)). The first is due by noon on 29 January and the second is by noon on March 26.

3) *One final paper - project* (15 pages maximum, using 12 pt. Times New Roman font, double spaced, standard margins, plus a bibliography). The topic of your final paper is your choice, developed in consultation with me using the following schedule:

February 25: By 5:00 p.m., Tuesday, February 25, you will send me a title and brief synopsis (250–300 words) of your proposed paper, along with a list of two primary sources and three secondary sources. Again, this should be in the form of a PDF file, emailed as an attachment to me. I will provide written feedback the following week.

After March 15 and April 13 &15: Further discussion through one-on-one meetings.

April 20-22: In-class presentations of your final paper project.

April 24: Final paper DUE by midnight, **Friday, April 24**.

Your grade is calculated out of 1000 points, distributed as follows:

Participation 250 points

Two book reviews (29 January & March 26) 200 points (100 points each)

Final paper title & synopsis (Febr 25) 100 points

Final paper presentation (April 20-22) 100 points

Final paper (April 24) 350 points

The grading scale is as follows:

A= 90% or 900 points (A-: 900-933; A: 934-966; A+: 967-1000)

B= 80% or 800 points (B-: 800-833; B: 834-866; B+: 867-899)

C= 70% or 700 points (C-: 700-733; C: 734-766; C+: 767-799)

D= 60% or 600 points (D-: 600-633; D: 634-666; D+: 667-699)

F= less than 59% or 599 points

ATTENDANCE

Please note that attendance in this course is absolutely **mandatory**. There is an attendance sheet to be signed! Always email me BEFORE class if you are ill or cannot attend. Two unexcused absences will result automatically in losing one full grade! Deadlines are strict.

SCHOLARLY DISHONESTY

Scholastic dishonesty includes (but is not limited to) cheating on assignments or examinations, plagiarizing (misrepresenting as one’s own anything done by another), submitting the same or substantially similar papers for more than one course without consent of all instructors concerned, depriving another of necessary course materials, and sabotaging another’s work. **All acts of misconduct in this course will be reported to the College of Arts and Sciences. The general policy is to assign an “F” for the course to students found guilty of academic dishonesty.**

THIS IS AN EXPERIMENTAL READING LIST AND INDIVIDUAL ITEMS MAY CHANGE DURING THE CLASS!

Schedule

**I. Theory and Methodology**

**Week 1 Introductions**

*Fr, Jan 10*

McNeill, J.R., *Something New Under the Sun: An Environmental History of the Twentieth-Century World* (New York: W.W. Norton & Company, 2000), Chapter One: 3-18.

**Week 2 Why study the history of technology & environment? And how?**

*Wed, Jan 15*

Garret Hardin, “[The Tragedy of the Commons](https://science.sciencemag.org/content/162/3859/1243.full),” *Science* 13 December 1968, 1243-1248.

Headrick, Daniel. *The Tools of Empire: Technology and European Imperialism in the Nineteenth Century* (Oxford: Oxford University Press, 1981), 3-14 (with notes).

Crosby, Alfred W. *Children of the Sun: A History of Humanity’s Unappeasable Appetite for Energy* (New York: W. W. Norton, 2006), xiii-58.

*Fr, Jan 17 LAB I: Methodologies*

Edgerton, David. *Shock of the Old: Technology and Global History Since 1900* (Oxford: Oxford University Press, 2007), ix-xix.

Methodology I: Qualitative/Quantitative, Historical Anthropology, Microhistory

**Week 3 Eurocentrism, the great divergence and energy regimes**

*Wed, Jan 22*

Crosby, Alfred. [*Ecological Imperialism: The Biological Expansion of Europe, 900-1900*, New Edition](https://ebookcentral.proquest.com/lib/duke/detail.action?docID=1543515) (1986; Cambridge: Cambridge University Press, 2004), 1-7, 269-293.

Pomeranz, Kenneth. [*The Great Divergence: China, Europe, and the Making of the Modern World Economy*](https://www-fulcrum-org.proxy.lib.duke.edu/concern/monographs/kw52j850s) (Princeton, N.J.: Princeton University Press, 2000), 3-27.

*Fr, Jan 24*

Barak, On. “Three Watersheds in the History of Energy,” *Comparative Studies of South Asia, Africa and the Middle East* 34 (2014): 440–453.

McNeill, John Robert, and Peter Engelke. [*The Great Acceleration: An Environmental History of the Anthropocene since 1945*](https://www-degruyter-com.proxy.lib.duke.edu/viewbooktoc/product/473020) (Cambridge, MA: Belknap Press of Harvard University Press, 2016), 1-6.

**Week 4 Expertise and power**

*Wed, Jan 29*

Carney, Judith. “Landscapes of Technology Transfer: Rice Cultivation and African Continuities.” *Technology and Culture* 37, 1 (1996): 5-35.

Mrázek, Rudolf. *Engineers of Happy Land: Technology and Nationalism in a Colony.* (Princeton, N.J.: Princeton University Press, 2002), .

Timothy Mitchell, [*Rule of Experts – Egypt, Techno-Politics, Modernity*](https://ebookcentral.proquest.com/lib/duke/detail.action?docID=224371) (Berkeley: University of California Press, 2002), 12-23.

*Fr, Jan 31* Lab II: Methodology II: Microhistory/Oral History

+ Skype interview with Prof. Pushpa Arabindoo (University College London): An Indian engineer’s family in 1970s-1980s Oman.

Book review I due !

**II. Energy in the Age of European Supremacy**

**Week 5 Agriculture and Land Survey**

*Wed, Febr 5*

Scott, James. *Seeing like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven: Yale University Press, 1998), Chapter 1: 11-52.

Maier, Charles. [*Once Within Borders - Territories of Power, Wealth, and Belonging since 1500*](https://find.library.duke.edu/catalog/DUKE008313269?utm_campaign=bento&utm_content=bento_result_link&utm_source=library.duke.edu&utm_medium=referral)(Cambridge MA: Harvard University Press, 2016), Chapter 3: .

Ross, Corey. [*Ecology and Power in the Age of Empire - Europe and the Transformation of the Tropical World*](http://proxy.lib.duke.edu/login?url=http://dx.doi.org/10.1093/acprof:oso/9780199590414.001.0001) (Oxford: Oxford University Press, 2017), Chapter 9: 307-348.

*Fr, Febr 7*

Mitchell, Timothy. *Rule of Experts – Egypt, Techno-Politics, Modernity* (Berkeley: University of California Press, 2002), Chapter 2: 55-72.

Davis, Diana K. *Resurrecting the Granary of Rome: Environmental History and French Colonial Expansion in North Africa* (Athens: Ohio University Press, 2007), .

Stolz, Daniel A. *The Lighthouse and the Observatory: Islam, Science, and Empire in Late Ottoman Egypt* (Cambridge: Cambridge University Press, 2018), .

**Week 6 Water I: Canalization and Irrigation**

*Wed, Febr 12*

Possible visit & class in Art History Visualization Lab with Prof. Sara Galetti: canals and digital humanities: canalization in Paris

Soll, David. *Empire of Water: An Environmental and Political History of the New York City Water Supply* (Ithaca: Cornell University Press, 2013), 1-11.

Pritchard, Sara. [*Confluence: The Nature of Technology and the Remaking of the Rhône*](https://find.library.duke.edu/catalog/DUKE008485956) (Cambridge, MA: Harvard University Press, 2011),

*Fr, Febr 14*

Peter Christensen, *The Decline of Iranshahr: Irrigation and Environments in the History of the Middle East 500 BC to AD 1500* (Copenhagen: Museum Tusculanum Press, 1993),

Mikhail, Alan. [*Nature and Empire in Ottoman Egypt: An Environmental History*](https://find.library.duke.edu/catalog/DUKE006199532) (Cambridge: Cambridge University Press, 2011), 38-81.

Tal, Alon. [*All the Trees of the Forest: Israel’s Woodlands from the Bible to the Present*](https://yale-universitypressscholarship-com.proxy.lib.duke.edu/view/10.12987/yale/9780300189506.001.0001/upso-9780300189506) (New Haven, Connecticut: Yale University Press, 2013), 1-8.

**Week 7 Coal**

*Wed, Febr 19*

McNeill, J.R., *Something New Under the Sun: An Environmental History of the Twentieth-Century World* (New York: W.W. Norton & Company, 2000), 50-83.

Wrigley, E.A. *Energy and the English Industrial Revolution* (Cambridge: Cambridge University Press, 2010), 91-112.

Jones, Christopher F. “A Landscape of Energy Abundance: Anthracite Coal Canals and the Roots of American Fossil Fuel Dependence, 1820-1860,” *Environmental History* 15, 3 (2010), 449-484.

*Fr, Febr 21* Lab III : *Topics for projects/final papers discussion*

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Book talk & conversation: On Barak, *Coalonization* (Berkeley: University of California Press, 2019)

**Week 8 Electricity and Space**

*Wed, Febr 26 Visit to Roxboro Energy (Steam) Plant in Semora, NC ?*

Hughes, Thomas Parke. *Networks of Power: Electrification in Western Society, 1880-1930* (Johns Hopkins University Press, 1983), 1-17.

Piper,Liza. *The Industrial Transformation of Subarctic Canada* (Vancouver: UBC Press, 2009), 227-256.

*Fr, Febr 28 Lab IV:* How to use archives in environmental history research?

Green, Nile. “[Spacetime and the Muslim Journey West: Industrial Communications in the Making of the ‘Muslim World’](https://academic.oup.com/ahr/article-abstract/118/2/401/42143),” American Historical Review 118, 2 (2013), 401-429.

Meiton,Fredrik. *Electrical Palestine: Capital and Technology from Empire to Nation* (Berkeley, Calif: University of California Press, 2019), 79-116.

**Week 9 Industrialization vs. Agriculture?**

*Wed, March 4*

Pollan, Michael. “[When a Crop becomes King](https://www.nytimes.com/2002/07/19/opinion/when-a-crop-becomes-king.html),” *New York Times* 19 July 2002.

Marx, Karl. [*Capital*](https://find.library.duke.edu/catalog/DUKE008981034?utm_campaign=bento&utm_content=bento_result_link&utm_source=library.duke.edu&utm_medium=referral)(London: Electric Book Co., 2001), I: 636-638 (“Large Scale Industry and Agriculture”).

Book talk & conversation: Hanan Hammad, *Industrial Sexuality: Gender, Urbanization, and Social Transformation in Egypt* (Austin: University of Texas Press, 2016).

*Fr, March 6 LAB V: Topics for projects/final papers*

Pamuk, Şevket and Jeffrey G. Williamson. “Ottoman De-Industrialization, 1800–1913: Assessing the Magnitude, Impact, and Response,” *Economic History Review* 64, 1 (2011), 159–184.

Crouchley, A. *The* *Economic Development of Modern Egypt* (London: Longmans, 1938), 239-253.

**Week 10 SPRING BREAK**

**III. Energy in the Age of US Supremacy**

Book review 2 due !

**Week 11 Oil I.: Appetite**

*Wed, March 18*

Frank, Alison Fleig. *Oil Empires: Visions of Prosperity in Austrian Galicia* (Cambridge, Mass.: Harvard University Press, 2005), 48-74.

Tucker, Richard. *Insatiable Appetite: The United States and the Ecological Degradation of the Tropical World* *– Concise, Revised Edition* (Lanham: Rowland, 2007), 113-150.

*Fr, March 20*

Oil Fields in the Middle East at the end of WWI

Munif, Abdelrahman. *Cities of Salt* (New York: Vintage Books, 1989),

Jones, Toby C. *Desert Kingdom: How Oil and Water Forged Modern Saudi Arabia* (Cambridge, Mass.: Harvard University Press, 2010), 54-89.

**Week 12 Oil Industry II.: Carbon Democracy**

*Wed, March 25*

Mitchell, Timothy. *Carbon Democracy: Political Power in the Age of Oil* (New York: Verso, 2011), 1-11; 109-143.

Painter, David. [“Oil and the American Century,”](https://www-jstor-org.proxy.lib.duke.edu/stable/41510299?pq-origsite=summon&seq=1#metadata_info_tab_contents) *Journal of American History* 99, 1 (2012), 24-39.

Watts, Michael. “Violent Environments: Petroleum Conflict and the Political Ecology of Rule in the Niger Delta, Nigeria,” in *Liberation Ecologies: Environment, Development, Social Movements*, 2nd ed., eds. Richard Peet and Michael Watts (London: Routledge, 1996), 250-272.

*Fr, March 27 LAB VI:* Discussion with someone from Duke Energy Program?

Jimmy Carter, “The President’s Proposed Energy Policy” (April 18, 1977):

<http://alternativeenergy.procon.org/sourcefiles/Carter%27s_Speech.pdf>

McAlister, Melani. *Epic Encounters - Culture, Media, and U.S. Interests in the Middle East Since 1945* (Berkeley: California, 2005), 125-40.

Jones, Toby Craig. “America, Oil, and War in the Middle East,” *The Journal of American History* 99, 1 (2012), 208-218.

**Week 13 Water II: Water and the Future of Power**

*Wed, Apr 1*

“[Will the Next War Be Fought Over Water?](https://www.npr.org/templates/story/story.php?storyId=122195532&t=1564601035167)” conversation with journalist Steven Solomon, NPR: 3 January 2010.

Barnes, Jessica and Samer Alatout. “Water Worlds: Introduction,” *Social Studies of Science* 42, 4 (2012): 438-488.

Tucker, Richard, “Containing Communism by Impounding Rivers: American Strategic Interests and the Global Spread of High Dams in the Early Cold War,” in John R. McNeill and Corinna R. Unger, eds, *Environmental Histories of the Cold War* (Cambridge: The German Historical Institute/Cambridge University Press, 2010), 148-163.

*Fr, Apr 3*

Gleick, Peter H. “Water, Drought, Climate Change, and Conflict in Syria,” *Weather, Climate, and Society* 6, 3 (2014): 331-340.

Alatout, Samer. “[Hydro-Imaginaries and the Construction of the Political Geography of the Jordan River - The Johnston Mission, 1953-56](https://ebookcentral.proquest.com/lib/duke/detail.action?docID=1743690),” in *Environmental Imaginaries of the Middle East and North Africa*, eds. Diana Davis and Edmund Burke (Athens, OH: Ohio University Press, 2011),

Jones, Toby C. “[State of Nature: The Politics of Water in the Making of Saudi Arabia](https://www-oxfordscholarship-com.proxy.lib.duke.edu/view/10.1093/acprof:oso/9780199768677.001.0001/acprof-9780199768677-chapter-10),” *Water on Sand: Environmental Histories of the Middle East and North Africa*, ed. Alan Mikhail (Oxford: Oxford University Press, 2013), 231-250.

**Week 14 The Climate of History and Air Conditioning**

*Wed, Apr 8*

Chakrabarty, Dipesh. “[The Climate of History: Four Theses](https://www-jstor-org.proxy.lib.duke.edu/stable/10.1086/596640?pq-origsite=summon&seq=12#metadata_info_tab_contents),” *Critical Inquiry* 35, 2 (2009), 197-222.

Behringer, Wolfgang. “[Climatic Change and Witch-Hunting: The Impact of the Little Ice Age on Mentalities](https://link-springer-com.proxy.lib.duke.edu/article/10.1023%2FA%3A1005554519604),” *Climatic Change* 43, 1 (1991), 335-351.

Cooper, Gail. *Air-Conditioning America: Engineers and the Controlled Environment, 1900-1960* (Baltimore: John Hopkins University Press, 1998), 1-6; 165-182.

*Fr, Apr 10*

White, Sam. “The Little Ice Age Crisis of the Ottoman Empire: A Conjuncture in Middle East Environmental History,” in [*Water on Sand: Environmental Histories of the Middle East and North Africa*](https://www-oxfordscholarship-com.proxy.lib.duke.edu/view/10.1093/acprof:oso/9780199768677.001.0001/acprof-9780199768677), ed. Alan Mikhail (Oxford: Oxford University Press, 2012), 71-90.

Winter, Tim. [“Urban Sustainability in the Arabian Gulf: Air Conditioning and Its Alternatives,”](http://pm6mt7vg3j.search.serialssolutions.com/?ctx_ver=Z39.88-2004&ctx_enc=info%3Aofi%2Fenc%3AUTF-8&rfr_id=info%3Asid%2Fsummon.serialssolutions.com&rft_val_fmt=info%3Aofi%2Ffmt%3Akev%3Amtx%3Ajournal&rft.genre=article&rft.atitle=Urban+sustainability+in+the+Arabian+Gulf%3A+air+conditioning+and+its+alternatives&rft.jtitle=Urban+Studies&rft.au=Winter%2C+Tim&rft.date=2016-11-15&rft.pub=Sage+Publications%2C+Inc&rft.issn=0042-0980&rft.eissn=1360-063X&rft.volume=53&rft.issue=15&rft.spage=3264&rft.externalDBID=BSHEE&rft.externalDocID=A473867874) *Urban Studies* 53 (2003): 3264–78.

Günel, Gökçe. [“Air Conditioning the Arabian Peninsula,”](https://www.gokcegunel.net/air_conditioning_the_arabian_peninsula.pdf) *International Journal of Middle East Studies* 50, 3 (2018): 573-579.

**Week 15 Individual meetings for final paper/project discussion**

*Wed, Apr 15*

**Meetings I**

*Fr, Apr 17*

**Meetings II**

**Week 16 Presentations in class**

*Wed, Apr 22*

**Presentations**