

Oil and Water

Environment & Technology in the Middle East and North Africa

History of Science 350

Instructor: Daniel Williford/ daniel.williford@wisc.edu/ Office Hours: Th 12-2 pm on Zoom

Lecture: TuTh 2:30 pm – 3:45 pm (Remote Synchronous Instruction)



From the construction of complex irrigation networks in the ancient world to contemporary debates about the relationship between climate change and the refugee crisis, environments and technologies in the Middle East and North Africa have been intertwined with questions of survival and of social order. This course provides an introduction to the environmental history of a diverse region – from Morocco in the Northwest corner of Africa to the Omani coast of the Indian Ocean. One aim of this course will be to reflect on how this region – sometimes referred to as the MENA (Middle East and North Africa) – has itself been defined and to what ends? This course will explore a diverse range of topics that connect the environmental history of the region to wider social, political, and cultural changes. How did the trans-Saharan slave trade produce new understandings of knowledge and nature? How did the colonial encounter with European empires transform local ways of navigating ecologies? How has Islamic jurisprudence approached questions of environmental preservation over

time? How did the rise of new infrastructures for resource extraction, especially for fossil fuels, remake state structures and political projects? The goal of this course is to help students develop a deep historical understanding of how knowledge, nature, and technology have shaped North Africa and the Middle East as well as to reflect on the contemporary stakes of this question not only in the region but also in a broad global context.

Official Description: Intensive exploration of issues in the history of science. Emphasis on developing critical thinking about science through formal and informal writing.

Requisites: None

Credit Policy: 3-credits. This class meets for two, 75-minute class periods each week over the fall semester and carries the expectation that students will work on course learning activities (reading, writing, problem sets, studying, etc) for about 3 hours out of the classroom for every class period. The syllabus includes more information about meeting times and expectations for student work.

Regular and Substantive Student-Instructor Interaction: This course provides for regular and substantive student-instructor interaction through direct instruction, providing feedback on student work, providing information about course content, and facilitating discussion of course content.

Learning Objectives

Students who complete this course will be able to:

- Identify core questions and concepts related to science, technology, and the environment in the history of the Middle East and North Africa
- Utilize historical methods to analyze primary sources including print media, visual art, film, web-based content, and technical materials
- Communicate with scholars regarding current research in this field
- Perform original research that situates questions of science, technology, and the environment in a historical context

Assignments

Individual Meeting: 5%

Early in the semester sometime before **2/25**, students will be required to schedule a brief one-on-one meeting with the instructor to discuss their learning goals and research interests. This is your opportunity to tell me the specific areas you would like to focus on in your own work. It is strongly preferred that you schedule this meeting during office hours using the Canvas calendar scheduling tool.

Participation: 20%

Participation grades will be earned based on active contributions to discussions and activities. Thoughtful, regular, and relevant participation during synchronous class discussions will help you earn full points. Contributions to asynchronous parts of the course (responding to other students' reading responses) will also help you earn points.

Reading Responses: 20%

Ten weeks out of the semester students will be required to post a written response to the readings for that week on the course website. Responses will vary in length depending on the assignment but will be between approximately 250 words and 350 words. The responses should be analytical in nature (rather than just summaries) and should connect to the readings from that week. The prompt or question for each week will be posted by 5pm on Sunday and all responses be posted by Thursday before class. They will be posted in the public Discussions section of Canvas, and you are strongly encouraged to respond and reference other students' posts. All posts will be graded 0 (for incomplete), 1 (for a post that does not respond to or fulfil the prompt), or 2 (for a complete and thoughtful response).

Annotated Bibliography/Proposal: 10%

Before your final research paper, you will be required to submit a brief proposal and detailed annotated bibliography at mid-semester. The proposal need only be a few paragraphs with a description of your topic and one or a series of research questions that you are encouraged to develop by talking with your peers and the instructor. The annotated bibliography should include at least **two primary sources and three additional secondary sources (academic articles are preferred)**. For each source you should write a one-paragraph description of its content and explain how it will help you answer your research question(s). **Due 3/11**

Research Paper: 30% (10-12 pages double-spaced)

Students will pursue a research topic of their own interest, culminating in a paper that makes an original historical argument based on a variety of primary and secondary sources. The paper should make use of the analytic and argumentative skills developed over the course of the semester.

Draft 1: (at least 7 pages) For In-class Peer Review: **4/15 (5 points)**

Revised Version: (10-12 pages + Bibliography): **4/29 (25 points)**

Final Presentation: 15% (length-TBD with Slides or other Visual Component)

The presentation should introduce your peers to the topic of your final research paper, discuss your use of primary sources, and offer a productive and provocative analysis of the subject matter. **Weeks 13 and 14.**

Grade Distribution

A	AB	B	BC	C	D	F
93.0–100%	88.0–92.9%	83.0–87.9%	78.0–82.9%	70.0–77.9%	60.0–69.9%	0–59.9%

- Individual Meeting – 5%
- Participation – 20%
- Reading Responses – 20%
- Annotated Bibliography – 10%
- Final Presentation – 15%
- Research Paper – 30%

Course Requirements & Policies

Course Canvas Site: Please consult the HISC 350 Canvas website frequently. All announcements will be posted there, as will important handouts and links to other sites.

Reading Responses should be posted in the “Discussion” tab of the course website.

Our synchronous sessions will all take place in Zoom.

Communication: You are encouraged to communicate your questions and concerns to the instructor, and it is preferred **that you use the Canvas course site to communicate.** Given the difficult and unpredictable circumstances this semester responses might not always be rapid, but we will be doing our best to make sure all questions and concerns are attended to. Meetings with the instructor during office hours should be scheduled online beforehand in the Appointments section of the Canvas Calendar.

Attendance: **Attendance at all course meetings is mandatory.** Active participation in discussions will be an important component of the overall course grade. **Attendance is not the same as participation.** Participation grades will be earned based on active contributions to discussions and activities, not passive attendance. Tardiness, leaving early, etc. will negatively affect your participation grade. A pattern of absences will result in a significant lowering of your grade. If a chronic illness or other emergency prevents attendance, **it is your responsibility to talk to the instructor as soon as possible to arrange an accommodation. That said, I understand that the complexities of online learning create difficulties. My inclination will be to be flexible, but it is up to you to communicate about attendance.**

Accommodations: The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for

students with disabilities is a shared faculty and student responsibility. Students are expected to inform faculty of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or recognized. Faculty will work either directly with the student or in coordination with the McBurney Center to identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA.

Religious observances: The University of Wisconsin-Madison supports accommodation of religious observances that might conflict with the course schedule. Students must notify the instructor within the first two weeks of class of the specific days or dates on which they request relief. Make-ups may be scheduled before or after the regularly scheduled requirements. It is understood that instructors may set reasonable limits on the total number of days claimed.

Academic Integrity: All students are expected to adhere to the University of Wisconsin – Madison's core values regarding academic integrity. Students should utilize the [Chicago Manual of Style Online](#) for all issues of source citation, along with any specific guidelines provided in the course assignments. Clarifying the disciplinary standards of research ethics and source citation is part of the educational mission of this course, and students should consult the faculty instructor regarding any questions. Plagiarism or other academic misconduct may result in a zero on the assignment or exam, a lower grade in the course, or failure in the course. See the Dean of Students Office for more information about the academic misconduct process (<http://students.wisc.edu/doso/acadintegrity.html>).

When in doubt, be sure to cite carefully and completely all sources from which you obtain information. This includes books, articles, documents, internet sites, encyclopedias, and periodicals. You must provide a citation if you exactly quote a source, paraphrase it, or extract information from it.

Privacy and Use of Audio/Video Recordings: Lecture materials and recordings for HISC1 350 are protected intellectual property at UW-Madison. Students in this course may use the materials and recordings for their personal use related to participation in this class. Students may also take notes solely for their personal use. If a lecture is not already recorded, you are not authorized to record my lectures without my permission unless you are considered by the university to be a qualified student with a disability requiring accommodation. [Regent Policy Document 4-1] Students may not copy or have lecture materials and recordings outside of class, including posting on internet sites or selling to commercial entities. Students are also prohibited from providing or selling their personal notes to anyone else or being paid for taking notes by any person or commercial firm without the instructor's express written permission. Unauthorized use of these copyrighted lecture materials and recordings constitutes copyright infringement and may be addressed under the university's policies, UWS Chapters 14 and 17, governing student academic and non-academic misconduct.

Diversity and Inclusion: [Diversity](#) is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals. The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background – people who as students, faculty, and staff serve Wisconsin and the world.

Student Health and Well-being: As a student you may experience a range of issues that can cause barriers to learning. These might include strained relationships, anxiety, high levels of stress, alcohol/drug problems, feeling down, or loss of motivation. University Health Services can help with these or other issues you may experience. Help is always available. You can learn about free, confidential mental health services available to you; call 608-265-6600 (option 2) or visit uhs.wisc.edu.

Grading Policies: Late assignments will be **docked half a letter** and another half for each 24-hour period after that. If you know you will have trouble meeting a deadline for any reason, please speak to the instructor in advance (or as soon as possible) to arrange an extension. **Given the unusual circumstance of this semester, you are strongly encouraged to request an extension when and if you need it!** To appeal a grade, you must submit a written explanation to the instructor explaining why you deserve a better grade. The instructor's decision, however, will be final, and may be to raise, lower, or keep the grade

Readings: Keeping up with daily reading assignments is an *essential* part of this course. All readings are subject to change, and students will be notified of any changes via email or the course website.

Connectivity: If you are having connectivity issues for online sessions please see: <https://it.wisc.edu/news/home-internet-connection-doctor-service/>

Course Schedule

Part I: Environmental Origins

Week 1: Space, Place, Defining the Region

1/26: Course Introduction

1/28: Reading: Abbas Amanat, "Introduction: Is there a Middle East?" in Michael E. Bonine, Abbas Amanat, and Michael Ezekiel Gasper, eds., *Is There a Middle East?: The Evolution of a Geopolitical Concept* (Stanford University Press, 2011), 1-7.

Reading: Ramzi Rouighi "Why are There no Middle Easterners in the Maghrib?" in Michael E. Bonine, Abbas Amanat, and Michael Ezekiel Gasper, eds., *Is There a Middle East?: The Evolution of a Geopolitical Concept* (Stanford University Press, 2011), 100-116.

Week 2: Agroecologies and Declensionist Narratives

2/2: Reading: J. R. McNeill, "The Eccentricity of the Middle East and North Africa's Environmental History," in *Water on Sand: Environmental Histories of the Middle East and North Africa*, ed. Alan Mikhail (New York, NY: Oxford University Press, 2013), 27-50.

2/4: Reading: Diana K. Davis, "Scorched Earth" in Michael E. Bonine, Abbas Amanat, and Michael Ezekiel Gasper, eds., *Is There a Middle East?: The Evolution of a Geopolitical Concept* (Stanford University Press, 2011), 170-187.

Week 3: Trans-Saharan Trails and Histories of Enslavement

2/9: Reading: Ghislaine Lydon, "The Organization of Caravan Trade" in *On Trans-Saharan Trails: Islamic Law, Trade Networks, and Cross-Cultural Exchange in Nineteenth-Century Western Africa* (Cambridge; New York: Cambridge University Press, 2009).

2/11: Reading: Benjamin Reilly, "Case Study: Khaybar," in *Slavery, Agriculture, and Malaria in the Arabian Peninsula*, (Ohio University Press, 2015), 82-101.

Week 4: Energy and Irrigation

2/16: Reading: Alan Mikhail, "Unleashing the Beast: Animals, Energy, and the Economy of Labor in Ottoman Egypt," *The American Historical Review* 118, no. 2 (2013): 317-48.

2/18: Reading: Geneviève Bédoucha, "The Watch and the Waterclock," in *Technological Choices: Transformation in Material Cultures since the Neolithic*, ed. Pierre Lemonnier (London: Routledge, 1993), 77-107.

Part II: Nature, Power, and Knowledge

Week 5: Islamic Ecologies and Orientalism

2/23: Reading: S. Nomanul Haq, "Islam and Ecology: Toward Retrieval and Reconstruction," *Daedalus* 130, no. 4 (2001): 141-77.

2/25: Watch: Jeremy Smith, Sanjay Talrej, Sut Jhally, *Edward Said on Orientalism* ([San Francisco, California, USA, 1998] : Kanopy Streaming, 2014), <https://wisc.kanopy.com/video/edward-said-orientalism>

Deadline to Schedule Individual Meeting

Week 6: Nature, Theology, and the Senses

3/2: Reading: "Theologies of Nature," Marwa Elshakry, *Reading Darwin in Arabic, 1860-1950*, (University of Chicago Press, 2014).

3/4: Reading: Khaled Fahmy, "An olfactory tale of two cities: Cairo in the nineteenth century" in *Historians in Cairo: Essays in Honor of George Scanlon*, ed. Jill Edwards (Cairo: American University in Cairo Press, 2002), 155-187.

Week 7: Technology and Temporality

3/9: Reading: "Introduction" (1-12) and "Effendi Hauntologies" (85-114) in On Barak, *On Time: Technology and Temporality in Modern Egypt* (Berkeley: University of California Press, 2013).

3/11: Excerpts from Ahmet Hamdi Tanpinar, *The Time Regulation Institute* [1961].

Annotated Bibliography Due

Week 8: Disaster Colonialism

3/16: Reading: Adam Guerin, "Disaster Ecologies: Land, Peoples and the Colonial Modern in the Gharb, Morocco, 1911-1936," *Journal of the Economic and Social History of the Orient* 59 (2016): 333-365.

3/18: Reading: Spencer D. Segalla, "Algeria, 1954," *Empire and Catastrophe: Decolonization and Environmental Disaster in North Africa and Mediterranean France since 1954* (Lincoln: University of Nebraska Press, 2020).

Week 9: Environmental Engineering and Techno-utopias

3/23: Reading: "Beyond the Frontier: Negotiating the Geography of Authority in Egypt's South" in Jennifer L. Derr, *The Lived Nile: Environment, Disease, and Material Colonial Economy in Egypt* (Stanford University Press, 2020).

3/25: Web: <https://www.neom.com/en-us/>

Part III: Political Ecologies of the Near Present

Week 10: Petro-Politics

3/30: Reading: Timothy Mitchell, "Introduction" (1-11); "The Prize from Fairyland" (43-65) *Carbon Democracy: Political Power in the Age of Oil* (London: Verso, 2013).

4/1: Reading: Katayoun Shafiee, "Petroleum Knowledge," in *Machineries of Oil: An Infrastructural History of BP in Iran* (Cambridge: The MIT Press, 2018).

Week 11: Violence and Development

4/6: Reading: Nancy Y. Reynolds, "Building the Past: Rockscapes and the Aswan high Dam in Egypt" in *Water on Sand: Environmental Histories of the Middle East and North Africa*, ed. Alan Mikhail (New York, NY: Oxford University Press, 2013), 27-50.

Reading: MENNA AGHA, "RECOGNIZING NUBIAN DISPLACIBILITY," *THE FUNAMBULIST MAGAZINE*, <https://thefunambulist.net/articles/73844>.

4/8: Reading: Toby Craig Jones, "America, Oil, and War in the Middle East," in Omnia El Shakry, *Understanding and Teaching the Modern Middle East* (Madison: University of Wisconsin Press, 2020).

Week 12: Environmental Infrastructures

4/13: Reading: Samer Alatout, "Hydro-Imaginations and the Construction of the Political Geography of the Jordan River," in Diana K. Davis and Edmund Burke III, eds. *Environmental Imaginations of the Middle East and North Africa* (Athens: Ohio University Press, 2011).

4/15: In-class peer-review activity

Draft of Research Paper Due

Week 13: Climate Change

4/20: Reading: Reading: Round Table “Living Climate Change in the Middle East and North Africa,” *International Journal of Middle East Studies* 51, no. 4 (November 2019).

4/22: Reading: Hamza Hamouchene, “The Ouarzazate Solar Plant in Morocco: Triumphal ‘Green’ Capitalism and the Privatization of Nature,” CADTM, December 28, 2020, <https://www.cadtm.org/The-Ouarzazate-solar-plant-in>.

Week 14: Final Presentations

4/27: Final Presentations

4/29: Final Presentations

Final Research Paper Due