Environmental History in the Early Modern Atlantic World
(Lower-Division Undergraduate Course)

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Office Hours: Wednesdays, 12:00-2:00 PM, or by appointment

Course Description
The purpose of this course is to familiarize undergraduate students with environmental history as a discipline, as well as introduce them to the Atlantic World as a region of study by focusing on the late fifteenth through mid-nineteenth centuries. This course does not assume previous experience with history courses and is intended to be a broad survey that encompasses several global regions. The course is arranged both thematically and geographically and emphasizes environmental change in the context of the eastern and southern coasts of the United States, the Caribbean, central and southeastern Mexico, Brazil, West Africa, and the Atlantic and Mediterranean coasts of Europe throughout the early modern period.

Course Objectives
- Learn about the Atlantic World during the early modern period
- Distinguish primary and secondary sources
- Understand and evaluate historical ideas, arguments, and points of view
- Present clear and compelling arguments, based on critical analysis of diverse historical sources
- Effectively communicate interpretations of sources and argument in written analyses and a final essay

Course Themes
Course themes that will be discussed include: climates, landscapes, agriculture, livestock, waterways and coasts, forests and mines, slavery, commodity chains, the history of science and botany, and environment change due to war. We will examine how these themes demonstrate the important role of the environment in shaping the Atlantic world economies and societies during the early modern period. The goal of this class is to get a sense of environments and ecologies in four primary regions throughout North America, South America, Africa, and Europe from the 1400s-1800s, and how the increased conflict, travel, trade, and development of the early modern period deeply affected landscapes, resources, and communities in a transatlantic context.

Required Texts
**Reading Schedule**
There will be primary and secondary source readings assigned for most weeks of the quarter. Each week will have the required readings listed—focus on having the required readings for the week done in advance of the last lecture of the week, which takes place on Thursdays. Each week on the schedule also has the weekly discussion section topic listed—the schedule will clearly indicate if you need to have certain readings done in advance of your section meeting for the week. Depending on what section you are registered for, this may mean focusing on certain readings earlier in the week, for example if you meet with your Teaching Assistant on Monday or Tuesday. Your Teaching Assistant will be in regular communication with you regarding your weekly meetings and any changes to the schedule will be communicated clearly in lecture and via email.

**Course Assignments**

**Primary Source Analysis:**
There is one, 3-4 page, double-spaced primary source analysis due in Week 4, which will serve as a helpful introductory assignment to assist you with examining primary source material, an integral skill for the final paper assignment due later in the quarter. The primary source analysis is a short writing assignment and is not intended to require outside research—you will select two primary sources from *Major Problems in American Environmental History: Documents and Essays*, edited by Carolyn Merchant and *Travel Narratives from the Age of Discovery: An Anthology*, edited by Peter Mancall (both available as PDFs on Canvas), to focus on in your analysis. Analyzing primary sources and learning how to extrapolate historical context and will be a central topic of Discussion Section meetings the weeks prior to the assignment due date, and will be revisited in advance of the final paper assignment.

**Mapping Environmental Change Project:**
There is one, 2-3 page double-spaced assignment due in Week 7 that will focus on using visual material by asking you to examine one historical map of a region focused on in the course content. Maps will be drawn from works such as *Early American Cartographies* by Martin Brückner, *Mapping Latin America: A Cartographic Reader*, edited by Karl Offen and Jordana Dym, and *Mappae Mundi: Representing the World and its Inhabitants in Texts, Maps, and Images in Medieval and Early Modern Europe* by Michael Fox and Stephen R. Reimer and will be accessible via the course Canvas site.

You will focus on using the historical map alongside contemporary satellite imagery (such as Google Maps) of a location to get a sense of what environmental changes have occurred since the early modern period. Potential themes to focus on include, but are not limited to: changing waterways and coasts, agricultural development, and increased urbanism. This is not an assignment intended to require outside research and is instead meant to utilize visual material and early modern cartography as a central resource for documenting environmental change over time. The maps chosen will focus on areas in regions we have discussed in course material, such
as Mexico City, Salvador, Santo Domingo, Boston, St. Augustine, London, Amsterdam, Venice, Luanda, and Cape Town.

**Paper:**
The culminating assignment for this course will be an 5-7 page, double-spaced paper, which will be broken down into several steps to help you narrow your topic, find usable sources, and edit your writing. A paper topic proposal is due in Week 5, followed by an outline in Week 8, culminating in the final paper due the Friday of Finals Week. The paper is of moderate length and is meant be centered around both primary and secondary sources as a way of examining a theme in environmental history in more detail. Your Teaching Assistant will be dedicating two discussion sections to working on your papers, including a peer-editing session towards the end of the quarter, and by breaking the process down into three parts, you will gradually work on the project throughout the last half of the quarter and receive feedback on both your topic and outline in advance of the final paper due date. We will also dedicate time to understanding how to properly cite sources, ways to effectively organize research papers, and how to integrate primary and secondary source material into a compelling historical argument.

**Discussion Section Attendance and Participation:**
Attendance and participation in discussion section is integral to the course and is meant to complement lecture material and aid with course assignments. Discussion section will focus on both analyzing course readings and major topics discussed in lectures, as well as develop your writing and research skills for assignments. Discussion section is where you will receive more tailored assistance with comprehension of course readings, as well as a chance to receive feedback from both your peers and Teaching Assistant as you work on assignments.

**Grading**
Primary Source Analysis: 20%
Mapping Environmental Change Project: 20%
Paper Topic Proposal: 10%
Paper Draft: 15%
Final Paper: 25%
Section Attendance and Participation: 10%

**Grading Scale**
100-93% = A  
92-90% = A-
89-87% = B+  
86-83% = B  
82-80% = B-
79-77% = C+  
76-73% = C  
72-70% = C-
69-60% = D  
59% and lower = F

**Helpful Resources**
UCSC Writing Center: https://ucsc.mywconline.com/
UCSC Learning Support: https://lss.ucsc.edu/
McHenry Library Support: https://guides.library.ucsc.edu/ask
ITS: https://its.ucsc.edu/

Course Schedule

Week 1: Introduction to Environmental History and the Early Modern Atlantic

Assignment Due: None

Discussion Section Activity: No section meetings during Week 1

Tuesday


Lecture Topic: Introduction to environmental history as a discipline and method of study.

This lecture will be a broad overview of some of the major ways environment history has emerged in the last fifty years in particular as a way of looking at different global regions and eras through the lens of topics like climate, waterways, agriculture, human-livestock relationships, commodity chains, and slavery. The first lecture of the quarter introduces students the environmental approaches to studying the early modern period in a transatlantic context.

Thursday


Lecture Topic: Defining and expanding the definition of the Atlantic world during the early modern period.

This lecture focuses on defining the geographic, economic, and cultural boundaries of the Atlantic world, both as a way to situate the course content in terms of major global regions and to decenter Eurocentric approaches to the early modern period. While much of the readings focus on European actors and spaces, this lecture also serves to introduce students to a variety of geographic and cultural contexts by including diverse regions across South and North America, the Caribbean, and West Africa in addition to areas like the Mediterranean and European Atlantic coasts.
Week 2: Maritime Environments and Waterways

Assignment Due: None

Discussion Section Activity: Discuss the Radkau and Candiani readings; compare and contrast the water-centric cities of Venice and Mexico City and how it affected early modern transportation, trade, and conflict.

Tuesday


Lecture Topic: Water-centric cities of early modern Europe; floods and water-based crises of the early modern period

This lecture introduces water as a central theme in the course by examining responses to water management systems and floods in early modern Europe. This lecture serves to frame maritime environments are not just oceanic, but also riverine, canal, and lake-based. The content for this lecture also helps to set up primary examples of water-centric environments within early modern Europe, such as Venice and its lagoon and Amsterdam and its canals.

Thursday

Reading: Vera S. Candiani, “Living in a Fluid Landscape” from Dreaming of Dry Land: Environmental Transformation in Colonial Mexico City.

Lecture Topic: Environmental change due to water systems in colonial Mexico City

This lecture goes more into depth in some of the specific marine environments in the Americas during the early modern period. The purpose of this week is to center water and waterways as central to the economic and cultural developments of multiple important regions of the early modern Americas. The role of waterways as central to military invasion and trade routes during the early modern period, but also as centers of regional identity are examined and compared in the context of multiple regions along the Atlantic and Gulf coasts of the Americas. Mexico City is used as a case study of a water-based city that undergoes an environmental transformation during the early modern period.
Week 3: Climate

Assignment Due: Primary source analysis (2-3 pages, double-spaced) on two documents from *Major Problems in American Environmental History: Documents and Essays*, edited by Carolyn Merchant, and/or *Travel Narratives from the Age of Discovery: An Anthology*, edited by Peter C. Mancall due Friday at 11:59 PM via Canvas.

Discussion Section Activity: Discuss and define “the Little Ice Age” and its impacts by analyzing the Morgan and Ó Gráda article

Tuesday

Reading: Kelly Morgan and Cormac Ó Gráda, “The Waning of the Little Ice Age: Climate Change in Early Modern Europe”; Sam White, “Climate Change in Global Environmental History” in *A Companion to Global Environmental History*.

Lecture Topic: Defining “the Little Ice Age” and its effects on early modern Europe.

This lecture will focus on content related to climate and how it intersects with the early modern period, in particular with agricultural and socio-economic changes during “the Little Ice Age” in Europe. This lecture goes more in-depth on the arguments scholars have put forth about the importance of climate in shaping early modern history, with a particular emphasis on the crises of the sixteenth and seventeenth-centuries.

Thursday

Reading: Dagomar Degroot, “Did the Spanish Empire Change Earth’s Climate?”

Lecture Topic: Climate change and the Little Ice Age’s effects in the colonial Americas.

This lecture emphasizes specific global effects of the Little Ice Age and climatological changes on early modern events, specifically the role of the Spanish in the Americas in the sixteenth and seventeenth centuries. The role of heating and cooling patterns on the spread of disease within areas like Mexico, the reforestation and agricultural changes throughout much of the Spanish Americas, and the on-going crises of recurring floods and other natural disasters during this period are emphasized.
Week 4: Africa’s Environment and the Slave Trade

Assignment Due: None

Discussion Section Activity: Examine and discuss Leo Africanus, trans. John Pory, “A Geographical History of Africa (1600)” in Travel Narratives from the Age of Discovery: An Anthology, as well as ways the rise of the transatlantic slave trade intersected with environmental change in regions like the Americas and the Caribbean during the early modern period.

Tuesday

Reading: Jane Carruthers, “Environmental History in Africa” in A Companion to Global Environmental History.

Lecture Topic: West and Central African environments and the growth of the transatlantic slave trade.

This lecture introduces coastal and central African as a primary factor in shaping environmental changes of the early modern period. This lecture will focus on the ecological and economic changes African areas like Lunada and the Gambia underwent during the rise of travel, trade, and eventually slavery, during the sixteenth and seventeenth centuries.

Thursday


Lecture Topic: Slave labor and the plantation environment in colonial North America and the Caribbean.

This lecture focuses on the post-transatlantic slave trade aftermath in the Americas and the Caribbean, examining how new environments, like the growing plantations in the Gulf coasts and on sugar islands caused environmental change in terms of waterways, agriculture, livestock, and population.
**Week 5: Agricultural Change, Food Systems, and Commodities**

**Assignment Due:** Paper topic proposal (1-2 pages, double-spaced) due Friday at 11:59 PM via Canvas

**Discussion Section Activity:** Workshop paper topics with peers and T.A.; Discuss “With Grains in Her Hair” by Judith Carney

**Tuesday**

**Reading:** Shawn William Miller, “Nature’s Conquests” and “The Colonial Balance Sheet” in *An Environmental History of Latin America*.

**Lecture Topic:** Early modern agricultural development and destruction in Atlantic environments.

This lecture builds off of the Thursday lecture from Week 4, continuing to examine colonialism’s effects on the landscapes of the Americas. This content focuses specifically on some the ways agricultural was impacted in the two centuries following European contact, as well as the introduction of new crops from both Europe and Africa to the Americas. This week’s lectures also serve to introduce students to some of the biological arguments put forth in Weeks 6 and 7 regarding livestock, disease, and population decline.

**Thursday**

**Reading:** Judith Carney, “‘With Grains in Her Hair’: Rice in Colonial Brazil.”

**Lecture Topic:** Commodity chains and food systems in a transatlantic context.

This lecture uses rice as a case study for some of the agricultural shifts and new crops introduced to the Americas during the early modern period. Building off of Tuesday’s content, as well as Week 4, where the aftereffects of colonialism, the slave trade, and agricultural change in the Americas and the Caribbean were introduced, this lecture focuses on Brazil as an example of new economic and ecologic factor in the Americas, and to the idea that enslaved persons, as well as their crops and technology, greatly shaped and defined colonial society in the Americas during an age that tends to emphasize Euro-centric narrative of invasion and exploit.
Week 6: Animals

Assignment Due: None

Discussion Section Activity: Discuss the “Mapping Environmental Change” project (due in Week 7); compare the issues raised in Appuhn and Garagarza’s articles related to livestock and environmental chance

Tuesday

Reading: Karl Appuhn, “Ecologies of Beef: Eighteenth-Century Epizootics and the Environmental History of Early Modern Europe.”

Lecture Topic: Livestock and environmental change in early modern Europe.

This lecture is the first of two that introduce students to the ways in which animals affected ecological change in the early modern period. Appuhn’s article and today’s lecture content is focused on Europe/Eurasia and the ways livestock in particular caused changes in both the environment and the spread of disease. This week’s lecture content seeks to lay some of the foundation about why epidemic disease was so destructive the Americas during the early modern period, with one major factor being the introduction of new animals into the landscape and their proximity to human settlements.

Thursday


Lecture Topic: Animals and their relationship to disease and agricultural in the colonial Americas.

This lecture continues the conversation about how animals, much like climate, are decisive actors in shaping ecological change during the early modern period. This lecture focuses on some of the ways animals profoundly changed the landscapes of the colonial Americas, with the introduction of cattle and sheep altering Mexico’s environment, and horses affecting much of the North American region overall. The connections between agricultural change, animals, and disease epidemics are introduced and explored this week, and will continue into the next week.
Week 7: Disease

Assignment Due: Mapping Environmental Change Project due on Friday at 11:59 PM via Canvas (be prepared to present on your chosen project topic in sections)

Discussion Section Activity: Present mapping environmental change project topics; discuss Hughes’ article and the concept of biotic invasion

Tuesday


Lecture Topic: The plague in early modern Europe and its environmental and ecological effects.

This lecture introduces the first of two that elaborate on the role of disease and its relationship to environmental change during the early modern period. The spread of plague throughout Europe during the 1300s-1600s is examined and Defoe’s 1665 work is used as an example of the effects of this last major wave of plague. This lecture seeks to situate disease in addition to climate and animals, as active factors in shaping ecological issues of the period.

Thursday

Reading: Shaun William Miller, “Tropical Determinism” in An Environmental History of Latin America.

Lecture Topic: Smallpox Epidemics in the colonial Americas; disease as a primary factor in the European invasion of the Americas during the sixteenth century.

This lecture examines the effects of disease in the context of the colonialism and imperialism of the sixteenth and seventeenth centuries in the Americas, in particular by examining colonial Mexico and some of the ways of disease and other ecological factors affected the European invasion of regions like Mexico and the Caribbean during the early modern period. Smallpox’s effects on the colonial Americas are specifically examined, as are issues like disease as a factor in shaping Spanish successes during the invasion of Mexico City-Tenochtitlán.
Week 8: Forests and Mines

Assignment Due: None

Discussion Section Activity: Workshop paper outline and discuss effective paper organization and citation formatting; discuss role of deforestation and mining in the colonial Americas.

Tuesday

Reading: Nancy Langston, “Global Forests” in *A Companion to Global Environmental History*.

Lecture Topic: Deforestation and reforestation in Europe and the Americas during the early modern era.

This lecture introduces two of the most important natural resources that dominated environmental changes in both Europe and the Americas during the early modern period: wood and precious metals and minerals. The role of forests in shaping changes in landscapes and urbanization in early modern Europe is focused on in this lecture, as well as the effects of both deforestation and reforestation in Europe and the Americas.

Thursday

Reading: John F. Richards, “Ranching, Mining, and Settlement Frontiers in Colonial Mexico.”

Lecture Topic: Mining and its relationship to slavery and colonialism in the colonial Americas.

This lecture focuses on mining operations as a primary form of environmental change and one of the most prominent labor systems of the colonial world in the sixteenth, seventeenth, and eighteenth centuries. Sites like Minas Gerais in Brazil, Potosí in Bolivia, and multiple sites throughout Mexico are focused on as examples of the ways mining operations introduced profound landscape changes, as well as new forms of labor and enslavement. The relationship between deforestation and mining sites will also be introduced and connect this lecture’s content to Tuesday’s and the general theme of ecological change due to economic and colonial enterprise.
Week 9: Imperialism, Botany, and the Environment

Assignment Due: Paper Rough Draft

Discussion Section Activity: Peer edit final paper drafts/outlines in pairs; discuss the relationship between ecology and imperialism.

Tuesday


Lecture Topic: Imperialism and Colonial Bioprospecting

This lecture focuses on the ways the acquisition of plants and collection of ecological knowledge was a branch of imperialism during the early modern period that affected environmental change and the place of the natural world. Categories of scientific study and the legacy of alchemy and its relationship to transatlantic trade and the scientific revolution are introduced as fundamental in shaping seventeenth and eighteenth century approaches to the environment.

Thursday

Reading: Jaime Marroquín Arredondo, “The Method of Francisco Hernández: Early Modern Science and the Translation of Mesoamerica’s Natural History.”

Lecture Topic: Natural History and its relationship to colonialism in the Americas

This topic centers the colonial Americas as sites of ecological knowledge and seeks to continue the conversation from the previous lecture on the relationship between science, imperialism, and trade during the early modern period, while also acknowledging the ways Indigenous and African-descended natural knowledge was dispersed and cultivated in the Americas during the European invasion of the region in the sixteenth century. This lecture emphasizes how environments, footways, and landscapes as a whole were altered during the early modern period, but also how categorizing and collecting natural knowledge became a particular interest during the seventeenth and eighteenth centuries.
Week 10: Environmental Conflicts and Futures

Assignment Due: None

Discussion Section Activity: Discuss final paper drafts; discuss the relationship between war and the environment during the Age of Revolutions.

Tuesday


Lecture Topic: Environment and revolutionary change in the early modern period.

This lecture emphasizes the ways in which environment, ecological declines, and changes in settlement patterns contributed to the Age of Revolutions, and some of the ways war intersects with environmental concerns in the context of the early modern Europe and the Americas. This lectures ties together much of the past two weeks, integrating the role of increased urbanization, the spread of disease, climactic change, and ecological imperialism as contributing factors to unrest and conflict during the seventeenth and eighteenth centuries in particular.

Thursday

Reading: Deborah McGregor. “Coming Full Circle: Indigenous Knowledge, Environment, and Our Future.”

Lecture Topic: Environmental history of the early modern period and its relationship to ongoing ecological struggles.

The last lecture of the quarter will focus on the way early modern environmental history of the Atlantic world has serious implications for some of the on-going climate and environmental crises. Themes introduced in previous lectures, such as deforestation, access to waterways, and climate change resonate with the readings and content for this week, and asks students to consider how looking at the early modern Atlantic world with an environmental focus can impact and reshape perspectives on historical events and trends and inform us about the origins of current crises.

Final Paper is due on the Friday of Finals Week by 11:59 PM
Lecture Bibliographies

Week 1

Tuesday

Thursday
Week 2

**Tuesday**


**Thursday**


Mundy, Barbara. *The Death of Aztec Tenochtitlan, the Life of Mexico City*. Austin: University of Texas Press, 2015.

Week 3

Tuesday

Thursday
Degroot, Dagomar. “Did the Spanish Empire Change Earth’s Climate?” Historical Climatology 2016.
White, Sam. “Shewing the difference betweene their conjuration, and our invocation on the name of God for rayne”: Weather, Prayer, and Magic in Early American Encounters.” William and Mary Quarterly 72, no. 1 (2015): 33-56.
Week 4

Tuesday

Thursday
Week 5

Tuesday

Thursday
Week 6

Tuesday

Thursday
Week 7

Tuesday

Thursday
Week 8

Tuesday

Thursday
Week 9

Tuesday

Thursday
**Week 10**

**Tuesday**


**Thursday**


