

University of Florida
Department of History
Spring 2022

WOH3404: Global History of Energy

Professor Sean Adams
MWF 4 (MWF 10:40-11:30)
Keene-Flint Hall 0119

Course Introduction and Objectives

This course will address several questions involving the relationship of energy to human society. It is global in size and scope, meaning that we will cover a large swath of human history on several continents. Such an ambitious size means that the course lectures and readings will be wide ranging and not attempt to provide a comprehensive account of the production and consumption of energy. Instead, we will move around the globe in order to engage themes such as energy transitions, the impact of energy on political and social structures, and the ways in which energy needs drive historical change.

After completing this course, students will have a greater appreciation of the historical development of energy from a global perspective. We will discuss these issues in class, providing you the opportunity to work through some of these very complex concepts. Over the course of the semester, students will also have the opportunity to hone verbal and written arguments in order to address complex historical questions.

Required Readings

There are six (6) required texts available for purchase at the UF Bookstore. If you choose to purchase these books online, please make sure that you leave enough time for shipping. A tardy delivery will not be an acceptable excuse for not having the reading materials. In addition to these books, there will be various readings, images, and other sources available online via the course e-learning site at <https://elearning.ufl.edu>. These are required readings and will form the basis of many assignments. Whether you print them out as hard copy or not is up to you, but please be sure that you can access them in time for class.

E. A. Wrigley, *Energy and the English Industrial Revolution*. New York: Cambridge University Press, 2010. ISBN 0521131855

Jeremy Zallen, *American Lucifers: The Dark History of Artificial Light*. Chapel Hill: University of North Carolina Press, 2019. ISBN 146965332X

Miguel Tinker Salas, *The Enduring Legacy: Oil, Culture and Society in Venezuela*. Durham, NC: Duke University Press, 2009. 082234419X

Jonathan Fetter-Vorm, *Trinity: A Graphic History of the First Atomic Bomb*. New York: Hill and Wang, 2012. ISBN 0809093553

Toby Jones, *Desert Kingdom: How Oil and Water Forged Modern Saudi Arabia*. Cambridge, MA: Harvard University Press, 2010. ISBN 0674049853

Gretchen Bakke, *The Grid: The Fraying Wires Between Americans and our Energy Future*. New York: Bloomsbury, 2016. ISBN 9781632865687

Grading Policy

Your grade in this class will be determined largely by your performance on a variety of brief written assignments, as well as longer papers. These exercises will allow you to hone your skills in critical thinking and writing in addition to providing thoughtful commentary on the global history of energy; this work is essential for success in both academic and professional settings. Improvement over the course of the semester is not only encouraged, but rewarded. My hope is that the work you do in this class will pay dividends—the market reference is quite intentional here—for years after you leave UF and Gainesville.

There will be six (6) brief essay assignments of roughly 500-750 words each, with the option of dropping the two (2) lowest grades. There will also be three (3) longer, mandatory essays of 1,500-2,000 word length due at the end of each major unit. All written work in this class will be evaluated with three major assessment tools in mind. First, the clarity and coherence of an argument made in the essay, with the clear use of supporting evidence will be required of all successful papers. Second, a logical and clear organization, in which the evidence is marshaled in support of the essay's argument, is a necessary component of a successful paper. Finally, proper grammar, punctuation, citation methods, and other elements of clear writing are an important part of this evaluation. All evaluated materials will be returned with qualitative feedback from the instructor, as well as a quantitative grade, within two (2) weeks of being handed in for evaluation. Please contact the instructor to receive your final essay following the conclusion of the semester.

Regular attendance in this course is not optional, but mandatory. Any more than three (3) unexcused absences will result in a reduction of the participation grade by a full letter. More than nine (9) unexcused absences will result in a failing grade for the course. Please be respectful to your fellow students by turning off all cell phones and tablets, arriving on time, and please avoid making excessive noise. You may use a computer to take notes, but any distracting web surfing, game playing, texting or other potentially disruptive behavior will not be tolerated. Students who do not abide by these simple rules of courtesy will be asked to leave.

Your final grade will be calculated on the following basis:

Grade Calculation	Grading Scale	Grade Value
First Essay Exam: 15%	100-93=A	A=4.0
Second Essay Exam: 20%	92-90=A-	A-=3.67
Brief Assignments: 30%	89-87=B+	B+=3.33
Participation/Attendance 10%	86-82=B	B=3.00
Third Essay Exam 25%	82-80=B-	B-=2.67
	79-76=C+	C+=2.33
	75-72=C	C=2.00
	71-69=C-	C-=1.67
	68-66=D+	D+=1.33
	65-62=D	D=1.00
	61-60=D-	D-=0.67
	59-0=E	E=0.00

Please do not hesitate to contact the instructor during the semester if you have any individual concerns or issues that need to be discussed. Students requesting classroom accommodation must first register with the Disability Resource Center (<https://disability.ufl.edu/>). The DSO will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation.

Plagiarism will not be tolerated in this class, as it constitutes intellectual theft and academic dishonesty. If you turn in the work of others and try to pass it off as your own, you will fail that assignment and risk expulsion from the University of Florida. I will give you the guidelines, expectations, and other information regarding the written work in this course, so you really have no reason to cheat. I take these matters very seriously and will prosecute vigorously if provoked. Any possible rewards derived from plagiarism simply don't justify the risk! All students must conform to UF's honesty policy regarding cheating, plagiarism, and the use of copyrighted materials. Your major assignments will be monitored with the Turnitin Anti-Plagiarism Service, so please keep in mind that cheating on the assignments in this course will be much more difficult than actually doing the work. All students must conform to UF's honesty policy regarding cheating, plagiarism, and the use of copyrighted materials, which you can find at the following address:

<https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>

No late work can be accepted for full academic credit. Any make-up exams or essays must be approved by the instructor after the submission of appropriate documented evidence that supports why a make-up exam or essay is appropriate. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

Contacts, Confidentiality and Recording Policies

It's always a good idea to meet with an instructor to track your progress in a college course. I am happy to meet with you in person during office hours—keep in mind that you can schedule a meeting with me outside of the scheduled hours—to discuss grades, assignments, or other course-related concerns during my regular office hours or appointments. If you have a brief question about the course, feel free to drop me an e-mail. However, I cannot accept assignments as e-mail attachments in this course without prior arrangement. I also cannot discuss grades over e-mail or the phone, as student records are confidential. UF views each student, not their parent(s), as the primary contact for all communication. For more information, see:

<http://www.registrar.ufl.edu/ferpa.html>

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited

to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Honor Code and Student Conduct Code.

I may keep a personal recording of class sessions, but am bound by the same restrictions on publication and distribution. These audio recordings are for my own use only.

COVID Policies

In response to COVID-19, the following practices are in place to maintain your learning environment, to enhance the safety of our in-classroom interactions, and to further the health and safety of ourselves, our neighbors, and our loved ones.

If you are not vaccinated, get vaccinated. Vaccines are readily available at no cost and have been demonstrated to be safe and effective against the COVID-19 virus. Visit this link for details on where to get your shot, including options that do not require an appointment: <https://coronavirus.ufhealth.org/vaccinations/vaccine-availability/>. Students who receive the first dose of the vaccine somewhere off-campus and/or outside of Gainesville can still receive their second dose on campus.

You are expected to wear approved face coverings at all times during class and within buildings even if you are vaccinated. Please continue to follow healthy habits, including best practices like frequent hand washing. Following these practices is our responsibility.

- Sanitizing supplies are available in the classroom if you wish to wipe down your desks prior to sitting down and at the end of the class.
- Hand sanitizing stations will be located in every classroom.

If you sick, stay home and self-quarantine. Please visit the UF Health Screen, Test & Protect website about next steps, retake the questionnaire and schedule your test for no sooner than 24 hours after your symptoms began. Please call your primary care provider if you are ill and need immediate care or the UF Student Health Care Center at 352-392-1161 (or email covid@shcc.ufl.edu) to be evaluated for testing and to receive further instructions about returning to campus. UF Health Screen, Test & Protect offers guidance when you are sick, have been exposed to someone who has tested positive or have tested positive yourself. Visit the [UF Health Screen, Test & Protect website](#) for more information. We will not hold online versions of this class unless otherwise required by UF during the semester

- Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work.
- If you are withheld from campus by the Department of Health through Screen, Test & Protect you are not permitted to use any on campus facilities. Students

attempting to attend campus activities when withheld from campus will be referred to the Dean of Students Office.

Continue to visit coronavirus.UFHealth.org and coronavirus.ufl.edu for up-to-date information about COVID-19 and vaccination.

Lecture and Readings Schedule (Subject to Change)

Week One: Course Introduction

January 5 Course Introduction

January 7 Why a Global History of Energy?
Readings: Wrigley, *Energy and the English Industrial Revolution*, pp. 1-25

Section 1: Organic to Mineral Energy

Week Two: Origins

January 10 Energy in Ancient Agriculture

January 12 Organic Energy Regimes
Readings: Wrigley, pp. 26-90

January 14 Why England?
First Brief Response Due

Week Three: Muscles and Calories

January 17 Martin Luther King Day—No Class Session

January 19 The Domestication of Animals

January 21 The Human Body as Energy

Week Four: Organic Regimes in Crisis

January 24 The First Energy Crisis in Western Europe
Readings: Wrigley, pp. 91-139

January 26 Artificial Suns

Readings: Zallen, *American Lucifers*, pp. 1-93

January 28 Organic vs. Fossil Fuels

Week Five: Energy Transitions I: Wood to Coal

January 31 Coal and the Industrial Revolution
Readings: Wrigley, pp. 140-210

February 2 Home Heating and Energy
Readings: Adams, "How Mineral Heat Came to American Cities," from *Home Fires: How Americans Kept Warm in the 19th Century*, pp. 39-64 (e-learning)

February 4 The Deepest, Darkest Abode of Men
Readings: Zallen, pp. 94-135
Second Brief Assignment Due

Week Six: The Organic Industrial Economy

February 7 The Horse as the Living Machine

February 9 Unsavory Light
Zallen, pp. 136-213

February 11 Smoke and Fog

Week Seven: King Coal

February 14 Electricity Remakes the City
Readings: Bakke, *The Grid*, pp. 1-84.

February 16 Empires of Coal

February 18 King Coal
First Major Essay

Section 2: The Rise of Oil

Week Eight: Greasy Energy

February 21 Rock Oil and the Origins of Petroleum
Zallen, pp. 215-271

February 23 Standard Oil and the Monopoly Problem

February 25 Importing the Petroleum Industry: Venezuela
Salas, *The Enduring Legacy*, pp. 1-72

Week Nine: Organic Persistence

February 28 Oil and War

March 2 Automobiles and the Demand for Petroleum
Readings: Wells, "Fueling the Boom," in *Car Country: An Environmental History*,
pp. 173-199 (e-learning)

March 4 Paving Paradise
Third Brief Assignment Due

5 March-12 March—Spring Break—Have a Good and Safe Holiday

Week Ten: Oil Reshapes the Globe

March 14 World War II

March 16 The Kingdom
Readings: Jones, *Desert Kingdom*, pp. 1-53

March 18 Global Patterns in Oil Markets

Week Eleven: National Identity in the Petroleum Age

March 21 Iran

March 23 Venezuela
Readings, Salas, pp. 73-203

March 25 Iraq
Fourth Brief Assignment Due

Week Twelve: Fueling Civil Wars

March 28 Mexico and Nationalization

March 30 Venezuela and the Petrostate Problem
 Readings: Salas, pp. 205-250

April 1 Nigeria's Oil Curse

Section 3: Problems of Scarcity and Abundance

Week Thirteen: Shocking the System

April 4 The Energy Crisis of the 1970s

April 6 The Flowering of the Desert
 Readings: Jones, pp. 90-178

April 8 Energy and the Gulf War(s)
 Readings, Jones pp. 179-244
Fifth Brief Assignment Due

Week Fourteen: Unhealthy Alternatives?

April 11 Atoms for Peace
 Readings: Fetter-Vorm, *Trinity* (entire book)

April 13 The Rise (and Fall) of Nuclear Energy

April 15 Blackout: The Failure of Electrical Networks in the Modern Age
 Readings: Bakke, pp. 85-148

Week Fifteen: Energy's Legacy So Far

April 18 Smarter Energy?

April 20 The Future
 Readings: Bakke, pp. 149-292
Sixth Brief Assignment Due

Final Exam Period: Thursday, 28 April 2019, 3 pm-5 pm

Contact Information

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 Tel: (352) 273-3354

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Website: <http://people.clas.ufl.edu/spadams/>

Office Hours: Mondays 1-3 pm; Wednesdays, 9 am-10 am; & by appointment.

Course Evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.