

GOV355M: The Politics of Critical Minerals

Unique Number: 37309 (current as of 27 August 2024)

Fall 2024

Class Meetings: T/TH 3:30 – 3:0 pm @ [GDC 6.202](#).

Instructor:

[Rhonda Evans](#), J.D., Ph.D. (she/her)

Associate Professor of Instruction, Department of Government

Director, Edward A. Clark Center for Australian and New Zealand Studies

Email: revans@austin.utexas.edu

Office: BAT 4.150

Office Phone:

Don't count on speaking with me by phone; I don't check the voicemail.

Office Hours:

Tuesdays, 5:00-6:30pm, in-person or zoom (<https://utexas.zoom.us/my/rhonda.evans>).

Wednesdays, 4:00-5:30pm zoom only. 15-minute appointments only. All appointments (zoom and in-person) must sign up in advance at [Calendly](#).

Course Description

The clean energy transition has a dirty secret. The technologies that make electrification possible—think electric batteries, solar panels, and wind turbines among others—require minerals like copper, lithium, nickel, and cobalt as well as rare earth elements. Supplies of these “critical minerals” are projected to fall short of that necessary to decarbonize the global economy in time to halt climate change. Amidst rising geopolitical tensions between China and the United States, China’s global dominance of critical minerals production and processing capacities fuels concern that it could exploit its position to achieve its strategic ambitions at the West’s expense. For these reasons, international competition to diversify existing critical mineral supply chains and develop new ones is intensifying. Governments are simultaneously competing and cooperating at local, national, and international levels to secure critical minerals supplies through the adoption of policies that identify critical minerals reserves, facilitate their extraction from the Earth, and foster their processing into the materials that clean energy technologies require.

In doing so, they confront a set of vexing challenges. First, mining and refining of critical minerals entails environmentally destructive practices many of which generate dangerous waste byproducts. For this reason, societies in economically advanced democracies, most notably the United States, were happy in the 1990s to offshore these activities, often to countries with lax environmental, social, and governance standards. Reshoring mining and refining often faces societal opposition that can use robust regulatory processes and environmental protections to delay the permitting of new projects for many years. Second,

even without such obstacles, mining projects are capital intensive projects that require considerable initial investment, yet they are risky ventures because their profitability and hence their viability remain vulnerable to cyclical swings in mineral prices, skilled labor shortages, and the development of new technologies that could either reduce demand for their product or render their product obsolete. Finally, because critical minerals supply chains are international in scope, their creation and maintenance require deft foreign policies that leverage existing alliances and forge new ones in order to foster transnational cooperation, while simultaneously managing the tensions that competition between and among allies can engender.

The course examines the economic and political origins of current critical minerals supply chains, and it unpacks the economic, political, and societal challenges that policymakers confront in their efforts to diversify and secure more reliable critical minerals supplies. In so doing, it focuses on a specific set of critical minerals—copper, lithium, nickel, cobalt, and rare earth elements—and examines political, economic, societal, and policy dynamics across a range of countries, including, Australia, Indonesia, the United States, Canada, the Democratic Republic of Congo, China, Vietnam, Peru, Chile, Argentina, and Bolivia as well as the European Union.

Academic Integrity and Ethics

Artificial Intelligence (AI) and Academic Integrity

It is already a violation of policy for students to represent work they did not do as their own, and work generated by an AI system that is not credited to that system falls under that policy. No extensive additions or emendations need to be crafted to address issues of plagiarism.

According to the University, ChatGPT or similar AI Tools must not be used to generate output for the completion of academic work in a manner not allowed by the instructor. All assignments should be fully prepared by the student. Developing strong competencies in the skills associated with this course, from student-based brainstorming to project development, will prepare you for success in your degree pathway and, ultimately, a competitive career. Therefore, the use of generative AI tools to complete any aspect of assignments for this course are not permitted and will be treated as plagiarism. If you have questions about what constitutes a violation of this statement, please contact me

Plagiarism and Academic Integrity

Using someone else's work in your own writing without giving proper credit is considered plagiarism, a serious form of academic dishonesty that can result in severe penalties. Copying someone else's work, buying a paper and submitting it as your own, copying and pasting text (even with changes), or borrowing images from an online source, are some examples of plagiarism. Even if you plagiarize accidentally, you can be held responsible and penalized.

Passing AI-generated work off as your own is also considered plagiarism, a serious form of academic dishonesty that can result in severe penalties.

Learning to cite sources appropriately is an important part of becoming a professional. When you are unsure about citation, you are encouraged to ask your instructor (who is already an expert in the discipline) what is appropriate in the context of your assignment. Consultants at The University Writing Center can also help you determine whether you are citing sources correctly—and they have helpful guides online for using direct quotations and paraphrasing. Reviewing those skills will help you feel confident that you are handling sources professionally in your writing.

You can read the University's definition of plagiarism and other forms of academic dishonesty in Sec. 11–402 of the Student Conduct Code. For more information, visit the Dean of Students' site.

Plagiarism Detection Software

All assignments in this course will be processed by TurnItIn, a tool that compares submitted material to an archived database of published work to check for potential plagiarism. Other methods may also be used to determine if a paper is the student's original work. Regardless of the results of any TurnItIn submission, the faculty member will make the final determination as to whether or not a paper has been plagiarized.

Requirements, Grading, and Classroom Expectations

Required Materials: We will use a wide assortment of materials, most of which are available in the public domain. All course materials are provided for you at no cost within Canvas.

Class attendance: This is a discussion-based course. As such, the course only works if students attend and participate.

Class participation: Participation in class meetings includes speaking in class, asking questions, and completing in-class individual and group exercises. Participation that reveals a lack of engagement with the assigned material will count against you.

Behavior expectations: Your behavior in the classroom and on Canvas should be respectful of others. It is possible to disagree respectfully. Cell phone use in class is prohibited. Laptop use will be restricted so bring paper and a writing utensil of your choice. Students are welcome to eat food during class so long as they clean up after themselves.

Assignments

The following table represents how you will demonstrate your learning and how we will assess the degree to which you have done so. It is also available as an Excel file on Canvas

that allows you to experiment with how different grades on the various assignments would affect your final course grade.

Assignment	Points Value	Due Date
Dr. Evans Office Hours Visit	5	By September 26
Guest Speaker Reaction Papers (3)	15	Within 48 hours of speaker
Participation	30	All semester
Annotated Bibliography 1 - News	15	September 8
Annotated Bibliography - Academic Journals	15	September 15
Annotated Bibliography - Think Tanks	15	September 22
Class Presentation (2 groups)	35	As assigned
Presentation Feedback (review 2 groups)	10	As assigned
Class Discussion Leadership	15	As assigned
Executive Summary	20	As assigned
Final Reflection Paper	25	December 8
	200	

Late Work and Making up Missed Work

Let's try to avoid this, shall we?

Extra Credit

There will be none. Don't ask. This one is non-negotiable.

+/- Grading Policy

Using the scale set forth below, +/- grades will be assigned for the final course grade.

Grade Breaks

Course Outline

All instructions, assignments, readings, rubrics, and essential information will be on Canvas at utexas.instructure.com. Check Canvas regularly. There is an element of fluidity built into this course. Changes to the schedule may be made as circumstances require. I will announce any such changes in class and communicate them to you via Canvas announcements. It is your responsibility to note these changes when announced, and I will do my best to ensure that you are notified of changes with as much advance notice as possible.

WEEK 1

08/27: Introductions.

Introduction to the course, instructor, and fellow students.

08/29: Drivers of demand.

Harriossn Bontje and Don Duval, “Critical minerals supply and demand challenges mining companies face,” *mining.com*, 20 April 2022.

WEEK 2

09/03: Problems of supply.

Polly Bindman, “The countries controlling the critical minerals supply chain: in four charts,” (30 October 2023).

Frik Els, “CHART: China’s Belt and Road mining investment hits record,” (20 February 2024).

Christoph Nedopil, “China Belt and Road Initiative (BRI) Investment Report 2023,” *Energy Monitor* (February 2024).

09/05: The key actors: Countries, international organizations, companies (i.e., the private sector), communities

Jared Cohen, “Resource realism: The geopolitics of critical mineral supply chains,” Goldman Sachs (13 September 2023).

Dou Shiquan and Xu Deyi, “The security of critical mineral supply chains,” 36 *Mineral Economics* (2023) 401-12.

Vlado Vivoda, “Friend-shoring and critical minerals: Exploring the role of the Minerals Security Partnership,” 100 *Energy Research & Social Science* (June 2023).

WEEK 3

09/10: Meet the critical minerals: Copper, Cobalt, and Lithium.

Daniel Elizalde, “Which Minerals are Critical? It’s More Complicated Than You Think” (6 August 2024).

09/12: Meet the critical minerals: Nickel and Rare Earths Elements.

Kathryn Goodenough, et al., “The Rare Earth Elements: Demand, Global Resources, and Challenges for Resourcing Future Generations,” 27 *Natural Resources Research* (April 2017), pp. 201-16.

WEEK 4

09/17: Understanding critical minerals value chains.

TBD.

09/19: Critical Minerals Policy and Policymaking.

Olle Östensson, “Promoting downstream processing: resource nationalism or industrial policy?” 32 *Mineral Economics* (2019), pp. 202-12.

WEEK 5

09/24: Countries that lack critical minerals but need them.

Dongsoo Kim, “From Dependence to Partnership: Korea's Quest for Supply Chain Stability in Critical Mineral Resources,” Korea Institute for Industrial Economics and Trade (29 February 2024).

09/26: Countries that have critical minerals and need them.

Poorva Karkare, “Resource nationalism in the age of green industrialization,” Discussion Paper No. 365, European Centre for Development Policy Management (ECDPM) (May 2024).

WEEK 6

10/01: Countries that lack critical minerals but don't need them.

James Boafo, et al., “The race for critical minerals in Africa: A blessing or another resource curse?” 93 *Resources Policy* (2024).

Mandy Meng Feng, “Climbing up the Critical Mineral Value Chains: The Global South and Green Industrialization in an Era of Disruption,” 57 *Vanderbilt Journal of Transnational Law* 795.

10/03: The business of critical minerals mining and processing.

Julio Mejía & Elmira Aliakbari, “Fraser Institute Annual Survey of Mining Companies 2023,” Fraser Institute (2024).

Patrik Söderholm, “The perils of ranking mining countries and regions: a critical look at the annual survey of the Fraser Institute,” 37 *Mineral Economics* (2024), pp. 313–30.

WEEK 7

10/08: The local impacts of critical minerals mining and processing.

Fabiano Maisonnave, “Growing demand for minerals sparks Indigenous outcry over ‘business as usual’ mining practices,” 18 April 2024.

John R. Owen, et al., “Energy transition minerals and their intersection with land-connected peoples,” 6 *Nature Sustainability* (2023), 203-211.

10/10: Overflow and exam review.

WEEK 8

10/15: Exam.

10/17: Presentation Workshop.

WEEK 9

10/22: Class Presentations and Discussion.

10/24: Class Presentations and Discussion.

WEEK 10

10/29: Class Presentations and Discussion.

10/31: Class Presentations and Discussion.

WEEK 11

11/05: Class Presentations and Discussion.

11/07: Class Presentations and Discussion.

WEEK 12

11/12: Class Presentations and Discussion.

11/14: Class Presentations and Discussion.

WEEK 13

11/19: Class Presentations and Discussion.

11/21: Guest speaker.

TBD.

WEEK 14

Fall Break – No Classes (Rejoice!)

WEEK 15

12/03: Guest speaker.

TBD.

12/05: Guest Speaker and Course Evaluations.

TBD.

Watch: How to approach course evaluations.

How Will You Learn?

Statement of Learning Success

Your success in this class is important to me. We all learn differently, and everyone struggles sometimes. You are not, ever, the only one having difficulty! If there are aspects of this course that prevent you from learning, please let me know as soon as possible. Together we will develop strategies to meet both your needs and the requirements of the course. I also encourage you to reach out to the student resources available through UT and I am happy to connect you with a person or Center if you would like.

Communication

The course Canvas site can be found at utexas.instructure.com. Please email me through Canvas. You are responsible for ensuring that the primary email address you have recorded with the university is the one you will check for course communications because that is the email address that Canvas uses.

Asking for help

To ask for help with respect to an assignment, use the appropriate discussion board on Canvas. More general assistance can be obtained by visiting office hours either online or in person. Email is only appropriate for questions that require short answers. Questions that involve explanations of course material should be asked in class or at office hours.

Inclusion

It is my intent that students from all backgrounds and perspectives be well served by this course, that students' learning needs be addressed, and that the diversity students bring to this class can be comfortably expressed and be viewed as a resource, strength and benefit to all students. Please come to me at any time with any concerns. I am a first-generation college student from a working-class family—my Dad was a coal miner. I understand diversity to include socioeconomic class as well as race, nationality, gender identity, etc.

Services for Students with Disabilities

I take this very seriously! I even serve on SSD's Faculty Advisory Committee. The university is committed to creating an accessible and inclusive learning environment consistent with university policy and federal and state law. Please let me know if you experience any barriers to learning so I can work with you to ensure you have equal opportunity to

participate fully in this course. If you are a student with a disability, or think you may have a disability, and need accommodations please contact Services for Students with Disabilities (SSD). Please refer to SSD's website for contact and more information: <http://diversity.utexas.edu/disability/>. If you are already registered with SSD, please deliver your Accommodation Letter to me as early as possible in the semester so we can discuss your approved accommodations and needs in this course. Please let me know if you are in the process of registering with SSD.

Course Policies and Disclosures

Academic Integrity Expectations

Students who violate University rules on academic dishonesty are subject to disciplinary penalties, including failure in the course and the possibility of dismissal from the University. Since such dishonesty harms the individual, all students, and the integrity of the University, policies on academic dishonesty will be strictly enforced. For further information, please visit the Student Conduct and Academic Integrity website at: <http://deanofstudents.utexas.edu/conduct>.

Confidentiality of Class Recordings

In the event that class recordings are made, they are reserved only for students in this class for educational purposes and are protected under FERPA. The recordings should not be shared outside the class in any form. Violation of this restriction by a student could lead to Student Misconduct proceedings. No student may record a class without the Professor's prior, written permission.

Getting Help with technology

Students needing help with technology in this course should contact the ITS Service Desk.

Sharing of Course Materials is Prohibited

No materials used in this class, including, but not limited to, lecture hand-outs, videos, assessments (quizzes, exams, papers, projects, homework assignments), in-class materials, review sheets, and additional problem sets, may be shared online or with anyone outside of the class without explicit, written permission of the instructor.

Unauthorized sharing of materials promotes cheating. The University is well aware of the sites used for sharing materials, and any materials found online that are associated with you, or any suspected unauthorized sharing of materials, will be reported to Student Conduct and Academic Integrity in the Office of the Dean of Students. These reports can result in sanctions, including failure of the course.

Religious Holy Days

By UT Austin policy, you must notify me of your pending absence as far in advance as possible of the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.

Names and Pronouns

I will gladly endeavor to honor your request to address you by your chosen name and by the gender pronouns you use. Class rosters are provided to the instructor with the student's chosen (not legal) name, if you have provided one. If you wish to provide or update a chosen name, that can be done easily at this page, and you can add your pronouns to Canvas.

University Resources for Students

Services for Students with Disabilities (SSD)

The university is committed to creating an accessible and inclusive learning environment consistent with university policy and federal and state law. Please let me know if you experience any barriers to learning so I can work with you to ensure you have equal opportunity to participate fully in this course. If you are a student with a disability, or think you may have a disability, and need accommodations please contact Services for Students with Disabilities (SSD). Please refer to SSD's website for contact and more information: <http://diversity.utexas.edu/disability/>. If you are already registered with SSD, please deliver your Accommodation Letter to me as early as possible in the semester so we can discuss your approved accommodations and needs in this course.

Counseling and Mental Health Center (CMHC)

All of us benefit from support during times of struggle. Know you are not alone. If you or anyone you know is experiencing symptoms of stress, anxiety, depression, academic concerns, loneliness, difficulty sleeping, or any other concern impacting your wellbeing – you are strongly encouraged to connect with CMHC. The Counseling and Mental Health Center provides a wide variety of mental health services to all UT students including crisis services, counseling services with immediate support and well-being resources. Additionally, CARE Counselors are located within the academic schools and colleges. These counselors get to know the concerns that are unique to their college's students. For more information on CMHC, visit <https://cmhc.utexas.edu> or call 512-471-3515.

University Health Services (UHS)

Your physical health and wellness are a priority. University Health Services is an on-campus high-quality medical facility providing care to all UT students. Services offered by UHS include general medicine, urgent care, a 24/7 nurse advice line, women's health, sports medicine, physical therapy, lab and radiology services, COVID-19 testing and vaccinations and much more. For additional information, visit <https://healthyhorns.utexas.edu> or call 512-471-4955.

Sanger Learning Center

Did you know that more than one-third of UT undergraduate students use the Sanger Learning Center each year to improve their academic performance? All students are welcome to take advantage of Sanger Center's classes and workshops, private learning specialist appointments, peer academic coaching, and tutoring for more than 70 courses in 15 different subject areas. For more information, please visit <https://ugs.utexas.edu/slc> or call 512-471-3614 (JES A332)."

Student Emergency Services (SES)

Student Emergency Services in the Office of the Dean of Students helps students and their families during difficult or emergency situations. Assistance includes outreach, advocacy, intervention, support, and referrals to relevant campus and community resources. If you need to be absent from class due to a family emergency, medical or mental health concern, or academic difficulty due to crisis or an emergency situation, you can work with Student Emergency Services. SES will document your situation and notify your professors. Additional information is available at <https://deanofstudents.utexas.edu/emergency/> or by calling 512-471-5017.

Important Safety Information

If you have concerns about the safety or behavior of fellow students, TAs or professors, contact BCCAL (the Behavior Concerns and COVID-19 Advice Line) at <https://safety.utexas.edu/behavior-concerns-advice-line> or by calling 512-232-5050. Confidentiality will be maintained as much as possible, however the university may be required to release some information to appropriate parties.

Classroom safety and covid-19

Even though teaching in a mask is uncomfortable, I may wear one. If you develop COVID-19 symptoms or feel sick, stay home and contact the University Health Services' Nurse Advice Line at 512-475-6877. If you need to be absent from class, contact Student Emergency Services and they will notify your professors. In addition, to help understand what to do if you have been had close contact with someone who tested positive for COVID-19, see this University Health Services link.

Carrying of Handguns on Campus

Texas' Open Carry law expressly prohibits a licensed to carry (LTC) holder from carrying a handgun openly on the campus of an institution of higher education such as UT Austin. Students in this class should be aware of the following university policies:

- Students in this class who hold a license to carry are asked to review the university policy regarding campus carry.
- Individuals who hold a license to carry are eligible to carry a concealed handgun on campus, including in most outdoor areas, buildings and spaces that are accessible to the public, and in classrooms.
- It is the responsibility of concealed-carry license holders to carry their handguns on or about their person at all times while on campus. Open carry is NOT permitted, meaning that a license holder may not carry a partially or wholly visible handgun on campus premises or on any university driveway, street, sidewalk or walkway, parking lot, parking garage, or other parking area.
- Per my right, I prohibit carrying of handguns in my personal office. Note that this information will also be conveyed to all students verbally during the first week of class. This written notice is intended to reinforce the verbal notification and is not a "legally effective" means of notification in its own right.

Title IX Disclosure

Beginning January 1, 2020, Texas Senate Bill 212 requires all employees of Texas universities, including faculty, to report any information to the Title IX Office regarding sexual harassment, sexual assault, dating violence, and stalking that is disclosed to them. Texas law requires that all employees who witness or receive any information of this type (including, but not limited to, writing assignments, class discussions, or one-on-one conversations) must report it.

Faculty members and certain staff members are considered “Responsible Employees” or “Mandatory Reporters,” which means that they are required to report violations of Title IX to the Title IX Coordinator. I am a Responsible Employee and must report any Title IX-related incidents that are disclosed in writing, discussion, or one-on-one. Before talking with me or with any faculty or staff member about a Title IX-related incident, be sure to ask whether they are a responsible employee. If you want to speak with someone for support or remedies without making an official report to the university, email advocate@austin.utexas.edu For more information about reporting options and resources, visit the Title IX Office or email titleix@austin.utexas.edu.

If you would like to speak with someone who can provide support or remedies without making an official report to the university, please email advocate@austin.utexas.edu. For more information about reporting options and resources, visit <http://www.titleix.utexas.edu/>, contact the Title IX Office via email at titleix@austin.utexas.edu, or call 512-471-0419. Although graduate teaching and research assistants are not subject to Texas Senate Bill 212, they are still mandatory reporters under Federal Title IX laws and are required to report a wide range of behaviors we refer to as sexual misconduct, including the types of sexual misconduct covered under Texas Senate Bill 212. The Title IX office has developed supportive ways to respond to a survivor and compiled campus resources to support survivors.

Campus Safety

The following are recommendations regarding emergency evacuation from the Office of Campus Safety and Security, 512-471-5767:

- Students should sign up for Campus Emergency Text Alerts at the page linked above.
- Occupants of buildings on The University of Texas at Austin campus must evacuate buildings when a fire alarm is activated. Alarm activation or announcement requires exiting and assembling outside.
- Familiarize yourself with all exit doors of each classroom and building you may occupy. Remember that the nearest exit door may not be the one you used when entering the building.
- Students requiring assistance in evacuation shall inform their instructor in writing during the first week of class.
- In the event of an evacuation, follow the instruction of faculty or class instructors. Do not re-enter a building unless given instructions by the following: Austin Fire

Department, The University of Texas at Austin Police Department, or Fire Prevention Services office.

- For more information, please visit [emergency preparedness](#).