Critical Minerals, Energy Security, and National Strategy

Venue: International Law Institute (ILI), Washington, D.C., USA
Date: May 18 – May 22, 2026 | Schedule: 9:00 AM – 4:00 PM
Format: In-Person
Instruction Modes: Lectures • Guest Speakers • Simulations • Case Studies
Course Advisor: Dr. Sara Vakhshouri

Course Description

Critical minerals—including lithium, cobalt, nickel, copper, graphite, and rare earth elements—are rapidly becoming the strategic foundation of modern economies, defense systems, and the global energy transition. Control over mineral supply chains increasingly shapes geopolitical competition, economic and energy security, industrial policy, and national security strategies.

The global race for critical minerals is transforming international relations, investment patterns, and resource governance. Governments must navigate complex challenges including supply chain concentration, environmental constraints, investment risks, and geopolitical competition.

This program equips senior policymakers and industry leaders with the knowledge and analytical tools needed to design national strategies, manage mineral diplomacy, and secure resilient supply chains.

Through lectures, policy discussions, case studies, and guided simulations, participants will examine how countries are positioning themselves in the evolving global mineral landscape.

Critical Minerals Policy Toolkit

Participants will also receive a Critical Minerals Policy Toolkit providing practical frameworks for:

- Developing national critical mineral strategies
- Designing regulatory and governance systems for mining sectors
- Managing supply chain risks and investment strategies
- Building international partnerships and mineral diplomacy
- Integrating environmental and ESG considerations into mineral development

Program Objectives

By the end of the program participants will be able to:

- Understand the role of critical minerals in energy systems, defense technologies, and national security strategies
- Analyze global supply chains and geopolitical risks associated with mineral production and processing
- Evaluate national and regional policy strategies for securing mineral supply chains
- Assess legal, environmental, and governance frameworks shaping mineral development
- Understand the role of critical minerals diplomacy in global competition and cooperation
- Design strategies for resilient, diversified, and sustainable mineral supply chains

Skills Developed

Participants will strengthen the following strategic capabilities:

Strategic foresight
Understanding long-term geopolitical and market trends shaping mineral supply chains.

Policy and regulatory design
Developing governance frameworks that attract investment while protecting national interests.

Geopolitical risk analysis
Evaluating supply chain vulnerabilities and strategic dependencies.

Negotiation and resource diplomacy
Managing international partnerships and mineral agreements.

Crisis management
Responding to supply disruptions, export bans, and geopolitical shocks.

Course Outline

Day 1 — Critical Minerals, Energy Security, and Supply Chains

Orientation (9:00 – 9:30)

Module 1 (9:30 – 10:30)
Critical minerals and energy security

- Minerals as the foundation of the energy transition
- Critical minerals in batteries, EVs, renewable energy systems, and grid storage
- Strategic minerals and defense technologies
- Minerals and national security strategies

Coffee break

Module 2 (10:45 – 12:00)
Global production and processing

- Key mineral supply chains
- Mining versus refining concentration
- Processing dominance and geopolitical implications
- Supply chain vulnerabilities

Case study: China and rare earth supply chains

Welcome Luncheon

Module 3 (1:00 – 2:30)
Strategic mineral applications

- Minerals in energy systems and clean technologies
- Defense and aerospace applications
- Semiconductors and advanced manufacturing
- Future demand scenarios

Case study: Lithium supply chains in Chile

Coffee break

Module 4 (2:45 – 4:00)
Instructor-guided simulation and team exercise

Strategic mineral supply chain risk assessment. Participants analyze supply chain dependencies and identify policy options to improve national resilience.

Day 2 — Regional Strategies and Global Competition

Module 1 (9:00 – 10:30)
United States critical minerals strategy

Guest Speaker: TBD

- supply chain security initiatives
- domestic mining and industrial policy
- strategic partnerships and mineral alliances

Coffee break

Module 2 (10:45 – 12:00)
European Union and strategic autonomy

Guest Speaker: TBD

- Critical raw materials policy
- Recycling and circular economy strategies
- Strategic partnerships an diversification

Lunch

Module 3 (1:00 – 2:30)
Middle East and emerging producers

Guest Speaker: TBD

- Mineral investment strategies
- Sovereign wealth funds and global resource investments
- Industrial diversification strategies

Case study: Indonesia's nickel strategy

Coffee break

Module 4 (2:45 – 4:00)
Instructor-guided simulation and team exercise

Regional strategy negotiation focused on securing mineral supply agreements and investment partnerships.

Day 3 — Regulation, ESG, and Market Dynamics

Module 1 (9:00 – 10:30)
Mining law and regulatory frameworks

Guest Speaker: TBD

- Mining licensing regimes
- Investment agreements and resource governance
- Export controls and trade restrictions

Coffee break

Module 2 (10:45 – 12:00)
Environmental governance and ESG

Guest Speaker: TBD

- Environmental impacts of mining
- ESG standards and investor expectations
- Community relations and social license to operate

Case study: Cobalt mining in the Democratic Republic of Congo

Lunch

Module 3 (1:00 – 2:30)
Mineral markets and pricing

- Commodity market structures
- Mineral pricing mechanisms
- Strategic investments and financing

Coffee break

Module 4 (2:45 – 4:00)
Instructor-guided simulation and team exercise

Designing a national critical minerals policy framework balancing investment, sustainability, and security

Day 4 — Critical Minerals Diplomacy

Module 1 (9:00 – 10:30)
Geopolitics of mineral supply chains

- Resource nationalism
- Strategic competition for minerals
- Supply chain alliances

Coffee break

Module 2 (10:45 – 12:00)
Mineral diplomacy and international partnerships

Guest Speaker: TBD

- Bilateral mineral agreements
- Development finance and resource partnerships
- Infrastructure and investment diplomacy

Lunch

Module 3 (1:00 – 2:30)
Energy transition versus mineral security

- Growing mineral demand from the energy transition
- Balancing climate goals with supply security
- Recycling, substitution, and innovation

Coffee break

Module 4 (2:45 – 4:00)
Instructor-guided simulation and team exercise

Critical minerals diplomacy negotiation

Teams participate in a multilateral negotiation focused on building strategic partnerships for critical minerals.

Day 5 — Program Wrap Up and Final Presentation

Module 1 (9:00 – 12:00)
Course wrap-up, instructor key insights, and final team presentations

The morning session begins with course wrap-up remarks and key insights from the instructor summarizing the main policy lessons and strategic themes discussed during the program, including trends in critical minerals, supply chain security, governance frameworks, and mineral diplomacy.

Following the wrap-up discussion, each team presents its national critical minerals strategy developed during the course. Presentations should address:

- Priority minerals and supply chain risks
- Domestic mining and industrial strategy
- Regulatory and governance framework
- International partnerships and mineral diplomacy
- Long-term strategy for resilient supply chains

Participants and instructors provide feedback and discussion following the presentations.

Final evaluation (12:00 – 12:15)
Certificate ceremony and closing remarks (12:15 – 12:45)

- Distribution of certificates and closing remarks.

Certificate Luncheon (1:00 – 2:00)

About the Course Advisor

Dr. Sara Vakhshouri is the founder and president of SVB Energy International, a leading strategic consulting firm, and the founder of SVB Green Access, a non-profit organization dedicated to advancing affordable and inclusive energy access programs in regions facing energy and water poverty.

She is faculty member and teaches courses on Energy Security, Energy Diplomacy, and Critical Minerals and National Security at Georgetown University's Walsh School of Foreign Service in the Science, Technology, and International Affairs (STIA) program. Dr. Vakhshouri also teaches and serves as Chair of the Center for Energy Security and Energy Diplomacy at the Institute of World Politics, and is also a faculty member at the KAPSARC School of Public Policy (KSPP) in Riyadh.

In addition, she is a Senior Fellow at both the Oxford Institute for Energy Studies and the Canadian Global Affairs Institute, and a recipient of the 2024 Institute of World Politics General Raymond Odierno Leadership Award. Dr. Vakhshouri also serves as the and the Vice President of National Capital Area Chapter of the United States Association for Energy Economics (USAEE), and on the advisory board of Romanian American Institute for Smart Energy (RAISE)

With over two decades of experience in the global energy industry, Dr. Vakhshouri has advised numerous governments, international institutions, and organizations—including the International Monetary Fund (IMF), the World Bank, the International Energy Agency (IEA), the Energy Information Administration (EIA), the International Energy Forum (IEF), and the Organisation Méditerranéenne de l'Énergie et du Climat (OMEC). She is a leading voice and a thought leader on global energy markets, energy transition and energy security.