

Prepare Yourself to be a More Effective
Professional in the New

Net Zero World

THE GEORGE
WASHINGTON
UNIVERSITY

WASHINGTON, DC

Earn a GWU Energy Resilience Certificate

The Environmental and Energy Management Institute (EEMI)'s **Energy Resilience Certificate (ERC)** or the **Advanced Energy Resilience Certificate (AERC)**. Courses are designed by leading industry experts. These continuing education and accreditation programs help prepare the professional workforce to be better leaders, energy advisors, decision makers, investors, regulators, and educators. EEMI certificates formally recognize development and commitment to advancing professional knowledge and skills.

Learn about resilience, renewable energy design and financing, energy strategies, electric vehicle markets, and related topics important to understanding how energy systems are evolving.



Students who earn the certificate will be able to:

- Apply resilience principles in a turbulent world
- Understand the landscape of resilience and clean energy technologies and applications
- Clearly communicate their understanding of the energy and resilience topics
- Confidently advise decision-makers on energy solutions and energy analysis techniques

Our instructors are US professionals, with multinational and multicultural backgrounds including India, China, Iran, Greece, UK, and the US. They are international practitioners and bring an understanding of US and global energy to their courses. Perfect for learners interested in international thought leadership on global energy and environmental challenges.

Course Format

Each course consists of 10 to 12 hours of tutorial videos, which you can access on any device and take at any time during the semester. Each course also includes optional live Q&A webinars with the instructor. **These certificate programs are ideal for busy professionals!**

TUITION \$550/course
CONTINUING EDUCATION 1 CEU/course
MORE INFORMATION Contact
esaltzberg@gwu.edu

Net Zero World

Earn a GWU Energy Resilience Certificate

The EEMI Energy Resilience Certificate (ERC)

Four non-credit short courses make up the ERC. **You can complete each 10-to-12-hour course at your own pace during the semester.** Each course can also be taken as a stand-alone class with a certificate of course completion awarded after passing a quiz. Complete all four courses to qualify for the EEMI Energy Resilience Certificate. Two courses are offered each of four overlapping semesters. Students can get the ERC in as little as four months.

SUMMER SEMESTER Jun 1–Sept 30

FALL SEMESTER Sept 1–Dec 31

WINTER SEMESTER Dec 1–Mar 31

SPRING SEMESTER Mar 1–Jun 30

Enterprise Resilience

OFFERED IN THE SUMMER & WINTER SEMESTERS

The principles of resilience and the capacity for systems to survive, adapt, and grow in the face of turbulent change are foundational to understanding energy assurance and security. Students will learn how designing for resilience can help enterprises and communities overcome disruptions—whether from human or natural causes—and to improve their adaptability to changing conditions. The course draws extensively on case studies of companies that have adopted resilience strategies and have kept their operations and energy systems functioning. [More about the course.](#)



Instructor: Dr. Joseph Fiksel, is the author of *Resilient by Design*, the seminal book on the topic, and co-founder of the Center for Resilience at The Ohio State University. He has provided consulting support to industry and government organizations worldwide.

Energy Strategies That Thrive in a Decarbonized World

OFFERED IN THE SUMMER & WINTER SEMESTERS

The realities of climate change are already starting to affect corporate bottom lines, forcing C-Suite executives to seek new ways to mitigate risk in their business operations and supply chains. Moreover, investor, employee, consumer, and community pressure are driving companies to contribute to the United Nation's Sustainable Development Goals (SDGs) in meaningful ways. In this course you will learn how to use energy consumption and carbon emissions as key performance indicators to reduce the cost of doing business and as a basis to optimize business operations. [More about the course.](#)



Instructor: Jimmy Jia is a Managing Partner of the Jia Group. For over a decade, he has specialized in creating strategies for corporations, governments, and non-profits that advance their mission and vision while reducing their impacts on the planet.

continued on page 3

Net Zero World

Earn a GWU Energy Resilience Certificate

The EEMI Energy Resilience Certificate (ERC)

continued from page 2

How to Design, Finance and Integrate Renewables in the Power Grid

OFFERED IN THE FALL & SPRING SEMESTERS

A key to understanding resilience is to know how the electric grid works and how renewable energy fits into it. This course provides participants with a grounding in the electric power grid and the knowledge needed to oversee, plan, finance and implement renewable energy projects. [More about the course.](#)



Instructor: Stratos Tavoulareas is an energy advisor working globally. Until recently, he was the Lead for Global Power at the International Finance Corp. Advisory Services, part of the World Bank Group. He has 40 years of experience in the energy sector working in 80 countries on renewable energy and the transformation of the power sector to accommodate new technologies.

On the Road to Mass Market Electric Vehicles

OFFERED IN THE FALL & SPRING SEMESTERS

Electric vehicles are leading the way to electrification of the economy. Students will learn about the types of electric vehicles, the EV market and factors driving market growth, and barriers to growth and how the market may overcome them. Key to the modernization of the energy system is the integration of electric vehicles into the grid system.

[More about the course.](#)



Instructor: Julian Bentley is the Managing Director and founder of Bentley Energy Consulting with more than 20 years of experience helping the federal government address energy and environmental challenges.

Net Zero World

Earn a GWU Energy Resilience Certificate

The EEMI Advanced Energy Resilience Certificate (AERC)

Professionals can gain a more complete range of competencies by taking **three additional short courses** to obtain the AERC.

WINTER SEMESTER Dec 1–Mar 31

How Electricity Markets Work

LAUNCHING IN THE 2021 WINTER SEMESTER

In the United States, how electricity is bought and sold varies by region of the country. Municipally owned utilities and customer-owned rural cooperatives support some communities, but most customers are served by investor-owned electric utilities and each is regulated differently. Learn how retail and wholesale electricity prices are set, how power is procured, how the markets are regulated, and implications for the future given the greening and modernization of the electricity sector.



Instructor: Venki Venkateshwara is President, Epoch Energy Advisory Services, and a long-time energy consultant who has worked at the world's leading management consultant firms, including McKinsey & Company, Charles River Associates, and FTI Consulting.

Smart Energy Systems and Cybersecurity

LAUNCHING IN THE 2021 WINTER SEMESTER

Smart energy systems incorporate information and communication technology (ICT) and control systems in power networks to increase the quality and reliability of power supply, facilitate the integration of renewable and distributed energy sources, optimally plan transmission and distribution systems, and reduce system costs. Learn how smart energy systems work and can use network controls to optimize other utility services including water, waste, transportation, building services and others.



Instructor: Payman Dehghanian, is an Assistant Professor of Electrical and Computer Engineering at George Washington University and an expert in power system reliability and electrical cybersecurity.

Building Decarbonization

LAUNCHING IN THE 2021 WINTER SEMESTER

Why does the path to a zero carbon economy go right through our buildings? Because the buildings sector has an outsized impact on global emissions. By increasing the efficiency of how buildings and their sites use energy, water, and materials; 'green' buildings can reduce their impacts on human health and the environment, including climate change, for the entire lifecycle of a building. This course introduces you to the foundational concepts and range of possible approaches to decarbonize the built environment and provides you with a framework to apply them to green building projects, programs, or policies for maximum benefit to society and the planet.



Instructor: Smita Chandra Thomas is the founder and principal of DC-based consulting practice Energy Shrink, LLC, serves as a senior green building consultant to IFC (World Bank), and is a LEED Accredited Professional (AP) and Certified Passive House Consultant (CPHC).

Prepare Yourself to be a More Effective Professional in the New

Net Zero World

Earn a GWU Energy Resilience Certificate

THE GEORGE
WASHINGTON
UNIVERSITY

WASHINGTON, DC

Affiliations of Past Students

Shell Global Solutions

Dow Chemical

Arup

Energy Experts International

USGAO

American Family Assurance

Alaska Center for Energy and Power

Connecticut Green Bank

Sierra Club

Siemens

World Wildlife Fund

Clif Bar

Seattle Public Utilities

American Council for an Energy
Efficient Economy

University Corporation for
Atmospheric Research

Dow Chemical

International Renewable Energy
Agency

Port of Portland

Deloitte

and many others

What Students Say About the Courses

“Who would not like to be more resilient? Take the course!”

—NELSON LEE, GREEN SKY SUSTAINABILITY, PRESIDENT

“I am a senior systems and electrical engineer with 25+ years of experience in the public, private, and government sectors. This course has provided me with knowledge, resources, and examples which I can use to communicate and emphasize the importance and inherent need for resilience”

—STEPHANIE KELLER, IEEE, MEMBER

“The course gave me better knowledge to perform a technical, business, and policy analysis for Electric Vehicle adoption.”

—ANDREW NEWENS, US DEPARTMENT OF ENERGY

“The sound technical knowledge and experience of the lecturer guided me through the components, technology, factors, drivers, and forecasts of the EV market.”

—SANDRINE BOUKERCHE, THE WORLD BANK

“The Enterprise Resilience short course is an excellent introduction to powerful techniques of systems thinking and dynamics that are being used to assist complex businesses and governments to not only anticipate and manage the wide range of threats and circumstances detrimental to their operations but also to maximize their potential for generating desired and positive outcomes.”

—DOUG SHARP, UNIVERSITY OF NEVADA LAS VEGAS,
INSTRUCTOR AND FORMER EPA EMERGENCY MANAGEMENT OFFICIAL

