



COLLABORATIVE GLOBAL RESISTANCE

EIS ACADEMY
SYLLABUS 2021



EIS ACADEMY IS NOW OFFERING ADVANCED OPERATIONAL RESILIENCE AND BUSINESS CONTINUITY COURSES

ALL-HAZARD

ALL-SCALE DISASTERS

PEER REVIEWED, EXERCISE-ENRICHED RESILIENCE LEARNING, TAUGHT BY EXPERIENCED EMERGENCY MANAGERS

INTERACTIVE VIDEO SIMULATION

SPECIAL FOCUS: Resilience planning, business continuity and emergency response, including infrastructure /supply-chain interdependency-driven coursework.

MANMADE HAZARDS



EMP – High Altitude Electromagnetic Pulse.
A nuclear detonation in the upper atmosphere.



IEMI - Intentional Electromagnetic Interference.
An IEMI device creates an electromagnetic pulse, potentially far higher in magnitude than EMP, though over very short ranges.



Cyber Terrorism
The destructiveness and sophistication of cyber weapons are growing.



Coordinated Physical Assault
Coordinated physical attacks on key elements could cause power outages of exceptionally wide geographic scope.

NATURAL HAZARDS



Seismic Event – High Magnitude Earthquake
Serious earthquakes in large regional seismic zones could cause power outages far larger and of longer duration than those experienced.



GMD – Geomagnetic Disturbance
Typically many times each year, the sun ejects a portion of its coronal mass into space.



Hurricanes and Other Severe Weather
Edison Electric Institute's report, "best practices that investor-owned utilities are making in response to lessons learned from Superstorm Sandy."

SECURING OUR FUTURE TOGETHER.

BLACK SKY HAZARD / CASE STUDY

A NUCLEAR DETONATION IN THE UPPER ATMOSPHERE CREATES AN ELECTROMAGNETIC PULSE (EMP) - A POWERFUL, DAMAGING ELECTROMAGNETIC FIELD COVERING A SUBCONTINENT-SCALE REGION.

It is important to note that, due to the statistical nature of field characteristics, most conventional computers and low voltage electronics will likely be unaffected and available to be reenergized if power grid operation can be restored, a key factor in enabling cost effective power grid protection strategies – and in preserving the viability of most of the customer “load” that will also be essential to such strategies. The size of the affected region depends on burst height, and certain features of the warhead.

Based on the full range of U.S. and international government studies and laboratory hardware vulnerability tests, and on U.S. and Russian nuclear testing, an EMP strike on an unprotected power grid, especially given its large, multi-region footprint, would cause an extended, subcontinent-scale duration power outage, and would precipitate cascading, direct and indirect failures of all other critical societal infrastructures.

EMP has been studied and addressed diligently as a military threat for over 50 years. In the United States, EMP has been treated by DOD as an active, growing hazard for decades. In 2011 the U.S. Defense Science Board renewed and highlighted this policy, issuing an interim report citing progress, coupled with ongoing recommendations for EMP survivability of certain DOD assets. In 2015, DOD expanded these recommendations to mandate EMP protection of “all mission critical facilities,” and announced its plans to reopen, upgrade and reoccupy the Cheyenne Mountain military complex due to its intrinsic EMP-protected characteristics.

The Congressional EMP Commission noted that deterring attack from terrorists who acquire nuclear weapons would be especially difficult because “such groups have no state identity, have only one or a few weapons, and are motivated to attack the US without regard for their own safety.”

The United States and its partners abroad conduct a variety of programs to reduce the likelihood that terrorist groups can acquire the nuclear materials and other components necessary for building such weapons. The Cooperative Threat Reduction (CTR) program, for example, helps secure nuclear materials in the former Soviet Union. While these programs have demonstrated substantial progress in reducing the threat that nuclear materials will be stolen, current estimates assess that, as of January 2012, there were still approximately 1440 tons of highly enriched uranium and around 500 tons of separated plutonium stockpiled globally providing a vast array of potential targets for terrorists seeking such materials. Other concerns include increasing proliferation of “nuclear weapon precursor” technology, and security concerns associated with the growing stockpiles of nuclear warheads and missiles in the control of unstable or unfriendly nations.

ALL-HAZARD, ALL-SCALE OPERATIONAL RESILIENCE AND BUSINESS CONTINUITY LEARNING

OPERATIONAL RESILIENCE

Learn to build adaptive planning for natural and manmade disasters, from local events to subcontinent or global scale disruption.

- INTERNAL ENTERPRISE RESILIENCE PLANNING AND INVESTMENT OPPORTUNITIES
- MULTI-LEVEL SUPPLIER AND CUSTOMER INTERDEPENDENCY RISK MAPPING AND MITIGATION STRATEGIES
- ANALYTIC TEMPLATES TO ASSESS PLANNING GAPS
- RESILIENCE-CRITICAL ENTERPRISE SUPPORT TOOLING
- PERSONNEL RESILIENCE TRAINING
- STAFF FAMILY AND COMMUNITY OUTREACH OPTIONS

ALL-HAZARD BUSINESS CONTINUITY

EIS Academy’s learning series include all-hazard, all-disaster-scale enterprise continuity planning; from conventional local disasters through subcontinent-scale, Black Sky complex catastrophes. Local and regional risk assessment and planning, including disrupted global supply chain mitigation, spanning current and emerging risk domains:

- SEVERE TERRESTRIAL WEATHER:** LOCAL, REGIONAL AND MULTI-REGION RISKS, DROUGHT, WILDFIRE, SEA LEVEL RISE, FLOODING...
- SEISMIC RISKS:** FROM LOCAL EARTHQUAKES TO EXTREME, REGIONAL EVENTS
- CYBERCRIME:** FROM ENTERPRISE ATTACKS TO LARGE SCALE, MULTI-SECTOR RISKS
- EXTREME SPACE WEATHER EVENTS**
- HEMP AND IEMI**
- TERROR ATTACKS ON CRITICAL INFRASTRUCTURE NODES**
- EXTREME PANDEMICS**

Screenshot:
**EIS Academy GLOBAL SUPPLY CHAIN
instructional video, with lessons learned from
COVID-19**



FACULTY AND VISITING PROFESSORS: INTERNATIONALLY RESPECTED BUSINESS AND GOVERNMENT CRISIS MANAGERS

FACULTY HIGHLIGHTS: SENIOR EXECUTIVES OF NATIONAL SCALE UTILITIES, CURRENT AND FORMER ASSISTANT SECRETARY AND CABINET-LEVEL GOVERNMENT LEADERS AND PARLIAMENTARY / CONGRESSIONAL MEMBERS.



Frank Koza

Frank Koza brings EIS Academy deep experience in electric subsector resilience. Frank Koza was formerly Executive Director of Infrastructure Planning at PJM, the world's largest electric grid operator.



Scott Blevins

A tech leader in all-hazard voice and data multi-corporate networks, he was responsible for all of Kentucky's emergency communication in floods, tornadoes and ice storms.



Dr. Paul Stockton

In his recent role as US Assistant Secretary of Defense for Homeland Defense, Paul led the Pentagon's FEMA and DHS support efforts during Superstorm Sandy, Hurricane Irene and other disasters.



Dr. Udi Ganani

Dr. Ganani brings the Academy his unique experience as CEO and a senior executive in some of Israel's largest and most important aerospace companies, and extensive resilience leadership work across Israel, the EU and the US.

Most recently, he has become the principal manager for all-sector, all-hazard situational awareness, decision support and communication system development at EIS Council. Dr Ganani is EIS Council's Vice President for Strategic Programs.

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Shandi Treloar

Chair of the NEMA North American Emergency Management Association's Private Sector Committee.

Shandi supported FEMA's Hurricane Katrina response and builds catastrophe planning for a wide range of emergency management projects.



David Maxwell

Former President of the US National Emergency Management Association (NEMA) and former Emergency Management Director of Arkansas. He led responses to 24 federally declared disasters and emergencies.



BG (ret) John Heltzel

Developer of the EARTH EX worldwide exercise engine and the Global Resilience Commission (GRCom). He is credited with saving many lives in State disasters as Kentucky's Emergency Management Head.



Dr. Chris Beck

As an adjunct professor at Northeastern University, Chris brings technical and policy expertise in several homeland security and national defense-related areas, including critical infrastructure protection, cybersecurity, WMD prevention and protection, and emerging threat identification and mitigation.

As a former US Congressional Committee staff director for cybersecurity and infrastructure protection, he will also offer a vital legislative perspective.

LEARNING RESOURCES

Video-framed exercise materials: Simulated disaster scenarios for Interactive learning.

Resilience video library: Sector-by-sector lessons learned and multi-sector interdependency assessments

Detailed reports: Insider risk projections

COURSES

Each course offered as 8 to 10 90-minute sessions, including invited professors, expert panel presentations and video-enriched exercise materials, with direct interaction with professors and options for remote, joint working groups for class projects.

LIFELINE INFRASTRUCTURES: Resilience status, interdependencies, gaps and opportunities

MOVING TO "R4G2": A Resilient, Reliable, Renewable, Restorable Green Grid

THE CRITICAL TRIAD: Focus on the Power Grid, Natural Gas and Finance Sectors

EMERGENCY POWER (ALL SECTORS): Moving

RELEVANT PROFESSIONS

Emergency Management

Business Operations and Business Continuity

Enterprise Management

Information and Risk Management

Utility Operations

Financial Management

EIS COUNCIL SUMMIT IN US CAPITOL BUILDING



Bottom right: Dr. Paul Stockton, former US Assistant Secretary of Defense (Superstorm Sandy response leader; **Bottom, middle:** Terry Boston, former CEO of PJM, Presidential Infrastructure Security Adviser; **Middle from left:** Lord James Arbuthnot, Chair of Risk Assessment and Risk Planning, UK House of Lords; Lord Toby Harris, UK House of Lords; Professor Brian Collins, Risk and Resilience Emeritus Professor University College London



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channel/UCdz9qvDH5PtNqJQFip_QfEw](https://www.youtube.com/channel/UCdz9qvDH5PtNqJQFip_QfEw)

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