“Global Trade and Weapons of Mass Destruction” is a six-week course intended to enable participants to better understand the process by which sensitive nuclear materials are transferred among states and the various means that states and companies can use to ensure that dual-use technologies and materials are not used in the production of weapons of mass destruction.

Each week will include two video case studies, two video lectures, four quizzes, and one short essay assignment on subjects covered that week. On average, it will take 4-5 hours to work through each week’s materials. Participants will be given two weeks to finish the Week 6 assignment.

**Week 1: The Overlap of Global Trade and Weapons of Mass Destruction**

Case Study 1: Asher Karni and Humayun Khan – A Classic Network

- Work of Middlemen
- Dual-use materials
- Controls on sensitive materials & enforcement activities
- Industry’s role in combating illicit trade

*Quiz #1: The Karni and Khan Network*

Lecture 1: Understanding the Dual-Use Challenge

- What do we mean by WMD?
- Challenge of balancing trade and security
- What are Strategic Trade Controls and why are they important?
- WMD production and its overlap with civilian efforts

*Quiz #2: Dual-Use Goods*

Case Study 2: Role of Trade Controls Historically: A Look at the Toshiba Case

- Toshiba Machine’s illegal export of milling machines to the Soviet Union.
- Ramifications on global security of export control violations
- The historical role of COCOM

*Quiz #3: The Toshiba Case*
Lecture 2: Impact of Toshiba case on three levels

- Review of the impact of Toshiba case on Japan’s trade control system
- Ramification of case on Toshiba’s activities
- Internal compliance programs in industry

Quiz #4: Implications of the Toshiba case

Additional Materials:

1) Basic overviews on threats of weapons of mass destruction provided on the NTI website http://www.nti.org/threats/ (particularly review the top pages for nuclear, biological, chemical, and delivery systems.)
2) NTI Glossary of Terms, http://www.nti.org/glossary/
3) Full version of Mark Shapiro’s “The Nuclear Underground” which details the Karni case is at:
   - http://youtu.be/wFVAkA3rQ6g (part 1)
   - http://youtu.be/39z3BPssYo0 (part 2)
   - http://youtu.be/I9UaJDaVBE (part 3)

Week 1 Assignment: Why is this item controlled?

Week 2: Stopping Proliferation: Suppliers Working Together

Case Study 1: The Emergence of Nuclear Trade Controls

- Importance of Foreign Assistance in WMD Programs
- India’s nuclear program and the Nuclear Suppliers Group
- Iraq’s nuclear ambitions and Challenges to the NSG

Quiz #1: Nuclear Trade Controls

Lecture 1: The How and Why of Multilateral Export Control Regimes (MECRs)

- International control regimes (MECRs)
- Trigger events
- MECR overview
- Rise and importance of catch-all controls
- Opposition to MECRs

Quiz #2: MECRs
Case Study 2: Chemical Weapons Controls: What Happens When too Little is Done?

- History of CW use and early elimination efforts
- Iraqi CW program
  - Iran-Iraq War and use by Iraqi forces
  - Establishment of Australia Group and CWC
- Syria’s CW program
  - Foreign assistance
- Unique challenges to controlling CW related items

Quiz #3: CW History

Lecture 2: Controlling Chemical Weapons, Biological Weapons, and Missile Technology

- Controlling CBW Related Materials
- The Missile Technology Control Regime (MCTR)
- Challenges facing the control of missiles
  - Secondary suppliers
  - The peaceful use dilemma
  - Continued concern about cruise missiles

Quiz #4: CBW and Missile Controls

Additional Materials:

1) Inventory of International Nonproliferation Organizations & regimes — [http://cns.miis.edu/inventory/organizations.htm](http://cns.miis.edu/inventory/organizations.htm) – Review the entries under Nonproliferation Export Control Regimes

*Week 2 Assignment: So you want to join a supplier regime?*

**Week 3: Looking at Modern Trafficking Networks**

Case Study 1: Understanding AQ Khan and his Network

- How the AQ Khan network was discovered
- Khan’s background and work in Europe
- Moving from importer to exporter
- The middlemen and outsourcing of production
- Response from the nonproliferation community
Quiz #1: The AQ Khan Network

Lecture 1: Understanding Illicit Trafficking in the Aftermath of AQ Khan

- Khan’s methodologies
- The unique case of Khan
- Khan network members
- Effective use of shell companies
- Implications on International regimes and legal structures

Quiz #2: Illicit Trafficking After AQ Khan

Case Study 2: Beyond Khan: A look at Iranian Procurement Efforts

- Iranian network and how it developed
- Working with Khan and establishment of own networks
- Working with middlemen
- Case of Majid Kakavand and the role of shell companies and transshipment points
- Difficulties for companies trying to avoid these actors

Quiz #3: Iranian Procurement

Lecture 2: Learning from North Korean Trafficking Cases

- General characteristics of North Korean illicit procurement
- Toko Boeki Case Study
- Implications for DPRK networks

Quiz #4: North Korean Trafficking Cases

Additional Materials

3) Andrea Stricker, Case Study – United States Busts Likely North Korean Transshipment Scheme, http://isis-online.org/isis-reports/detail/case-study-united-states-busts-likely-north-korean-transshipment-scheme/

Week 3 Assignment: Understanding Trafficking Networks
Week 4: New Approaches to Controlling WMD Proliferation

Case Study 1: Creating International Legal Obligations to Control Illicit Trafficking

- Gaps in international law concerning WMD and terrorism after 9/11
- Creation of UN Security Council Resolution 1540
- Increased focus on domestic controls of sensitive materials
- Effect of 1540 on international trade

Quiz #1: Legal Means to Control Illicit Trafficking

Lecture 1: Understanding the Effects of UN Security Council Resolution 1540

- Characteristics of UNSCR 1540
- “Domestic controls” as key elements of national strategic trade control systems
- Efforts of the 1540 Committee

Quiz #2: UNSCR 1540

Case Study 2: Getting Proactive: Novel Nonproliferation Initiatives

- Creation of the Proliferation Security Initiative
- Legal and practical questions of interdiction
- Impact on global trade
- Financial approaches—Going after the money

Quiz #3: Novel Nonproliferation Initiatives

Lecture 2: Making the Most of Novel Approaches

- PSI as an activity, not an organization
- Ship boarding agreements
- Does PSI contradict international maritime and aviation law?
- Evolution of maritime security issues
- Impact on Industry

Quiz #4: Novel Approaches

Additional Materials

1) UNSCR 1540: Toward a Safe, Secure World, produced by the Stanley Foundation and the Stimson Center, (http://youtu.be/WBAZ7N3olXY)
2) Short Video Report on OSCE Workshop on U.N. Security Council Resolution 1540 http://www.youtube.com/watch?v=oQ7kJOL1bpQ&feature=share&list=PLB123BD1F62E0374
3) See the PSI website at http://www.psi-online.info/
4) Ian Williams, Proliferation Security Initiative: Ten Years On, http://armscontrolnow.org/2013/05/28/proliferation-security-initiative-ten-years-on/

Week 4 Assignment: Will Novel Approaches Work?

Week 5: Multiple Lines of Defense – The Role of Industry And Government Implementation

Case Study 1: An Inside Job? A Case Study of Diversion

- Concerns about Iran’s nuclear program and procurement
- How did US-made pressure transducers end up in an Iranian nuclear facility?
- Use of Front Companies and False End-Users
- The Insider Problems

Quiz #1: Diversion Case Studies

Lecture 1: The Insider Problem

- Key Challenges global companies face
- Internal Compliance Programs

Quiz #2: Insiders and Internal Compliance Programs

Case Study 2: What happens when a system fails? The Mitutoyo Case

- Mitutoyo Case and Japan’s Export Controls
- Japanese export control reform
- Importance of government-industry interactions

Quiz #3: The Mitutoyo Case

Lecture 2: Challenges in Domestic Trade & Export Control Systems

- Japan’s Trade Controls
- Importance of strong legislation, well-trained staff, and sufficient resources
- Industry Awareness
- Post-Mitutoyo reforms
- US Export Control reform and its implications

Quiz #4: Challenges to Export Control Systems
Additional Materials


Week 5 Assignment: What to do when the system breaks?

Week 6: The Future of Strategic Trade Controls

Case Study 1: Growing Economies of Today and How They Control Materials

- Recent ring magnets case
- Historical perspective of strategic trade controls for new suppliers
- Current status and major challenges

Quiz #1: Controls in Growing Economies

Lecture 1: New Suppliers and New Challenges

- Emerging suppliers
- Strategic trade controls as a domestic imperative
- Malaysia as a case study

Quiz #2: The Challenges of New Suppliers

Case Study 2: Controlling the Flow of Technology in an Ever-Developing World

- Concerns of the future already here today
- 3-D printing case and Expanding ITT issues
- Cloud computing concerns

Quiz #3: Controls on New Technologies

Lecture 2: Innovation, Technology, and the Future of Strategic Trade Controls

- Key Shifts – The Flow of New Technologies
- Evolution of traditional export control tools
• Proliferation of national strategic trade control programs
• “Compliance Convergence”

Quiz #4: The Future of Strategic Trade Controls

Additional Materials


Week 6 Assignment: Take a Walk on the Dark Side.