Science and Security Resource Document

Research institutions play a crucial role in safeguarding national security by protecting confidential data, intellectual property, and classified materials from foreign threats. Institutions must also keep their faculty and students apprised of new disclosure and training requirements mandated by the federal government.

This resource document identifies key terms; effective practices proposed by institutions and government and non-government entities; links to various government and non-government entity lists, and topical analysis and proposed policy recommendations in several key areas.

Key Terms and Background Information

Effective Practices

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Key Terms and Background Information

Export Controls: seek to *control* access to specific types of technology and the associated data and services. A *deemed export* is the export or release of *information* about a "controlled technology" to a foreign national in the U.S. or abroad for which a government export license is required.

Many universities have designated staff such as security officers and/or export control officers to comply with the export control laws and regulations. Three government organizations have jurisdiction for enforcement of export controls:

- Bureau of Industry and Security, U.S. Department of Commerce - oversees the Export Administration Regulations (EAR) which control dual-use technology on the Commerce Control List (CCL).
- Directorate of Defense Trade Controls, U.S. Department of State – oversees the International Traffic in Arms Regulations (ITAR) which controls items designed and developed for military use on the U.S. Munitions List.

- Office of Foreign Assets Controls in the Department of Treasury controls interactions with nations in which the U.S. has trade embargos, e.g. Cuba, Iran, Syria, North Korea, Myanmar and Sudan.

- More: Export Controls: ITAR and EAR

Fundamental Research Exclusion: Excludes most campus-based research at U.S. universities from export controls. Applies to: unrestricted publicly available technology and software arising during or resulting from fundamental research undertaken at U.S. universities where the resulting information is ordinarily published and shared broadly.

Deemed Exports: Deemed exports was added to the export regulations in 1994 and is the export or release of information about a "controlled technology" to a foreign national in the U.S. or abroad for which a government export license is required. Defines "Technology" as specific information necessary for the "development", "production", or "use" of a product.

National Security Directive (NSDD) 189: Issued in 1985 by the Reagan Administration and reaffirmed in November 2001 by then-National Security Advisor Condoleezza Rice, established a "fundamental research" classification as the appropriate means for protecting national security while encouraging necessary research. Declared fundamental research should "to the maximum extent possible" remain unrestricted.

- More: Secretary Condoleezza Rice's 2001 reaffirmation of NSDD-189

Controlled Unclassified Research (CUI): Established by Executive Order 13556, the Controlled Unclassified Information (CUI) program standardizes the way the Executive branch handles unclassified information that requires safeguarding or dissemination controls pursuant to and consistent with law, regulations, and Government-wide policies.

- More: CUI Categories; Official CUI Policy Documents; Additional Background Documents

Dual Use Research of Concern (DURC): Life sciences research that, based on current understanding, can be reasonably anticipated to provide knowledge, information, products, or technologies that could be directly misapplied to pose a significant threat with broad potential consequences to public health and safety, agricultural crops and other plants, animals, the environment, materiel, or national security.

2010 DOD Memo on Fundamental Research Policy: Signed by then Under Secretary of Defense Ashton Carter, provides clarifying guidance and reinforces earlier guidance, to ensure DOD will not restrict disclosure of the results of fundamental research, unless such research efforts are classified for reasons of national security or as otherwise required by applicable federal statutes, regulations, or executive orders.

Classified Research and Information, Presidential Executive Order 13526: 2009 Executive Order signed by President Obama that prescribes a uniform system for classifying, safeguarding, and declassifying national security information, including information relating to defense against transnational terrorism.

Research Integrity: The adherence to the professional values, principles, and best practices that underpin our research communities. It forms the base on which to collaborate in a fair, innovative, open, and trusted research environment.

- More: G7 Common Values and Principles on Research Security and Research Integrity

Research Security: Involves the actions that protect our research communities from actors and behaviors that pose economic, strategic, and/or national and international security risks. Particularly relevant are the risks of undue influence, interference, or misappropriation of research; the outright theft of ideas, research outcomes, and intellectual property by states, militaries, and their proxies, as well as by non-state actors and organized criminal activity; and other activities and behaviors that have adverse economic, strategic, and/or national security implications.

- More: G7 Common Values and Principles on Research Security and Research Integrity

Effective Practices

Institutional Effective Practices
- "Effective Practices Summary," *AAU and APLU*, updated May 2020
- "Framework for Review of Individual Global Engagements in Academic Research," *COGR*, January 2020
- "Global Engagement: Rethinking Risk in the Research Enterprise," *The Hoover Institution*, July 2020
- "University Engagement with China: An MIT Approach," *MIT China Strategy Group*, November 2022
- "Guidance on Leading Institutional Practices to Safeguard Research," *U15 Canada*, June 2023

Government Resources
- "[University and Federal Actions Taken to Address Research Security Issues](#)," *AAU*, January 2024
- "[Best Practices to Protect Privacy, Civil Liberties, and Civil Rights of Americans of Chinese Descent in the Conduct of U.S. Intelligence Activities](#)," *ODNI*, May 2022
- "[Integrity and Security in the Global Research Ecosystem](#)," *OECD Directorate for Science, Technology and Innovation*, June 2022
- "[Safeguarding Science Toolkit](#)," *ODNI*, November 2022
- "[How to Avoid Immigration-Related Discrimination When Complying with U.S. Export Control Laws](#)," *DOJ Civil Rights Division*, April 2023
- "[G7 Best Practices for Secure & Open Research](#)," *Security and Integrity of the Global Research Ecosystem (SIGRE) Working Group*, May 2023
- "[Safeguarding International Science: Research Security Framework](#)," *NIST*, August 2023

Additional Resources and Historical Documents

- "[NASEM Beyond 'Fortress America' Report](#)," *NASEM*, 2009
- "[Condoleezza Rice Letter on NSDD-189](#)," September 2001
- "[NSDD-189 – National Security Decision Directive 189](#)," *FAS*, September 1985
- "[The Corson Report](#)," *National Academy of Sciences*, 1982

Entity Lists

Government Lists
- DOD [Section 1286](#) List
- BIS [Lists of Parties of Concern](#) (Denied Persons, Entity, Unverified, Military End User, and Consolidated Screening)
- OFAC [Sanctions Lists](#)

Others Lists
- [Defence Universities Tracker](#), *Australian Strategic Policy Institute (ASPI)*, November 2019
- [Chinese Talent Program Tracker](#), *Center for Security and Emerging Technology (CSET)*, November 2020
- [Named Research Organizations](#); [Sensitive Technology Research Areas](#), *Government of Canada*, January 2024

Topical Analysis & Proposed Policy Recommendations

Anti-Asian Bias/Discrimination
Analysis
- "[Caught in the Crossfire: Fears of Chinese-American Scientists](#)," *Asian American Scholar Forum*, September 2022

Competition with China
Policy Recommendations
- "[Proposal to Reset Economic Relationship with The People's Republic of China](#)," *House Select Committee on Strategic Competition Between the United State and the Chinese Communist Party*, December 2023
- "[2023 Annual Report to Congress](#)," *U.S.-China Economic and Security Review Commission*, November 2023
- "[Meeting the China Challenge: A New American Strategy for Technology Competition](#)," *Working Group on Science and Technology in U.S.-China Relations*, November 2020

Confucius Institutes
Analysis
- "[China's Impact on U.S. Higher Education](#)," *Senate Homeland Security and Government Affairs Committee, Permanent Subcommittee on Investigations*, February 2019
- "[The Middle Kingdom Meets Higher Education: How U.S. Universities Support China's Military-Industrial Complex](#)," *Foundation for Defense of Democracies*, December 2021
- "[After Confucius Institutes: China's Enduring Influence on American Higher Education](#)," *National Association of Scholars*, June 2022
- "[China: With Nearly All U.S. Confucius Institutes Closed, Some Schools Sought Alternative Language Support](#)," *Government Accountability Office*, October 2023

Policy Recommendations
- "[New Report Proposes Criteria the Department of Defense Could Use to Determine Whether a College or University that Hosts a Confucius Institute May Receive DOD Funding](#)," *NASEM Committee on Confucius Institutes at U.S. Institutions of Higher Education*, January 2023
- "[Foreign-Funded Language and Culture Institutes at U.S. Institutions of Higher Education](#)," *NASEM Committee on Confucius Institutes at U.S. Institutions of Higher Education*, June 2023

Export Controls & Critical and Emerging Technologies
Analysis
- "[Export Controls: Enforcement Agencies Should Better Leverage Information to Target Efforts Involving U.S. Universities](#)," *Government Accountability Office*, June 2022
- "[Seven Critical Technologies for Winning the Next War](#)," *Center for Strategic and International Studies*, April 2023
- "[Critical Technologies Tracker](#)," *Australian Strategic Policy Institute (ASPI)*, September 2023

Policy Recommendations
- "[Protecting U.S. Technological Advantage](#)," *NASEM Committee on Protecting Critical Technologies for National Security in an Era of Openness and Competition*, September 2022
- "[McCaul Releases 90-Day Review Report of Commerce Department's BIS](#)," *House Foreign Affairs Committee*, December 2023

International STEM Talent
Analysis

- "China is Fast Outpacing U.S. STEM PhD Growth," *Center for Security and Emerging Technology (CSET)*, August 2021
- "STEM Immigration is Critical to American National Security," *Institute for Progress*, March 2022
- "Characterizing the Loss of Talent from the U.S. STEM Ecosystem," *Science & Technology Policy Institute (STPI)*, February 2024

Policy Recommendations

- "National Defense Education and Innovation Initiative (NDEII)," *AAU Report on Meeting America's Economic and Security Challenges in the 21st Century*, 2006
- "International Students and American Competitiveness," *AAU-Business Roundtable*, November 2022

Agency Risk Assessment & Mitigation
Analysis

- "Threats to the U.S. Research Enterprise: China's Talent Recruitment Programs," *Senate Homeland Security and Government Affairs Committee, Permanent Subcommittee on Investigations*, November 2019
- "Small Business Research Programs: Agencies are Implementing Programs to Manage Foreign Risks and Plan Further Refinement," *Government Accountability Office*, November 2023
- "Safeguarding the Research Enterprise," *JASON Report*, March 2024

Policy Recommendations

- "Agencies Need to Enhance Policies to Address Foreign Influence," *Government Accountability Office*, December 2020
- "Agency Actions Needed to Address Foreign Influence," *Government Accountability Office*, October 5, 2021
- "NIH Could Take Additional Actions to Manage Risks involving Foreign Subrecipients," *Government Accountability Office*, June 2023
- "National Institute of Standards and Technology: Strengthening Disclosure Requirements and Assessing Training Could Improve Research Security," *Government Accountability Office*, December 2023
- "Strengthening Interagency Collaboration Could Help Agencies Safeguard Federal Funding from Foreign Threats," *Government Accountability Office*, January 2024

Foreign Donations & Section 117
Analysis

- "Report on Institutional Compliance with Section 117 of the Higher Education Act of 1965," *U.S. Department of Education, Office of the General Counsel*, October 2020
- "The Corruption of the American Mind: How Concealed Foreign Funding of U.S. Higher Education Predicts Erosion of Democratic Values and Antisemitic Incidents on Campus," *Network Contagion Research Institute*, November 2023

- "[The Ongoing Failure to Report: Yale University, Qatar, and Undisclosed Foreign Funding](#)," *The Institute for the Study of Global Antisemitism and Policy*, December 2023

Transnational Repression
Analysis
- "[Free to Think: Report of the Scholars at Risk Academic Freedom Monitoring Project](#)," *Scholars at Risk*, December 2021
- "[In the Shadows of Authoritarianism: Egyptian and Saudi Transnational Repression in the U.S.](#)," *The Freedom Initiative*, 2023

Policy Recommendations
- "[Addressing Transnational Repression on Campuses in the United States](#)," *Freedom House*, January 2024
- "[On My Campus, I Am Afraid: CHINA'S TARGETING OF OVERSEAS STUDENTS STIFLES RIGHTS](#)," *Amnesty International*, May 2024
- "[HSAPC Foreign Malign Influence in Higher Education Subcommittee Final Report](#)," *DHS*, June 2024