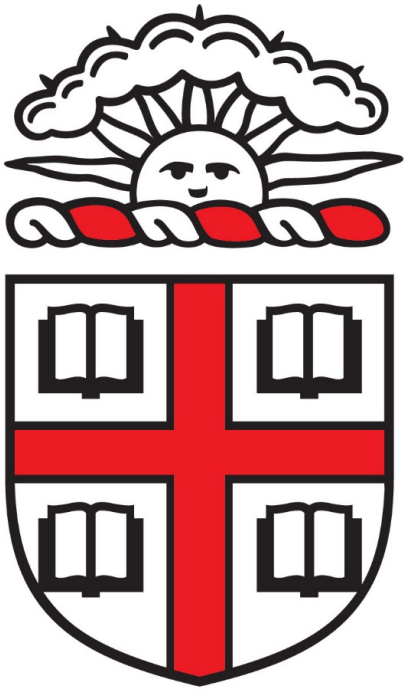

BROWN

EXPORT CONTROL COMPLIANCE MANUAL

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List of Abbreviations

BIS	Department of Commerce Bureau of Industry and Security
CCL	Commerce Control List
CJ	Commodity Jurisdiction
DDTC	Department of State Directorate of Defense Trade Controls
DoD	Department of Defense
EAR	Export Administration Regulations
ECCN	Export Control Classification Number
ECCP	Export Control Compliance Plan
ECO	Export Control Officer
ITAR	International Traffic in Arms Regulations
OFAC	Department of the Treasury Office of Foreign Assets Control
ORI	Office of Research Integrity
PI	Principal Investigator
SDN List	Specially Designated Nationals and Blocked Persons List
TAA	Technical Assistance Agreement
TCP	Technology Control Plan
USML	United States Munitions List

I. PURPOSE

The purpose of Brown University's Export Control Compliance Manual is to provide guidance on U.S. Export Control laws and regulations, to identify key export compliance issues related to research, education, and all other activities conducted within a university setting, and to describe how Brown University ("the University") implements its *Export Control and U.S. Economic Sanctions Policy* ("institutional policy"). The procedures outlined herein serve as Brown's program of internal controls, safeguards and educational measures designed to minimize risk of potential violations of all applicable export control laws and regulations and institutional policy. The U.S. export control agencies place responsibility on the University to understand and ensure compliance with export control laws and regulations.

II. SCOPE

Brown's institutional policy and procedures outlined in this Manual apply to *University personnel*, defined as "Brown University faculty, staff, visiting scientists, postdoctoral fellows, students, and anybody who is paid by or otherwise engaged by the University to conduct research, teach, or provide services at or on behalf of the University."

III. EXPORT CONTROLS LAWS AND REGULATIONS & U.S. ECONOMIC AND TRADE SANCTIONS

The U.S. Government controls exports of sensitive equipment, software and technology as a means to promote and protect national security interests, foreign policy objectives, and its economic interests. Through its export control system, the U.S. government complies with international commitments, such as nonproliferation agreements, UN Security Council sanctions, and UNSC resolution 1540[1]. It also aims to achieve various objectives, such as preventing the proliferation of weapons of mass destruction, advancing U.S. economic interests at home and abroad, aiding

[1] Under Chapter VII of the United Nations Charter, which affirms that the proliferation of nuclear, chemical and biological weapons and their means of delivery constitutes a threat to international peace and security, this resolution obliges States, inter alia, to refrain from supporting by any means non-State actors from developing, acquiring, manufacturing, possessing, transporting, transferring or using nuclear, chemical or biological weapons and their delivery systems.

regional stability, implementing anti-terrorism and crime controls, and protecting human rights.

Export controls restrict the *export*[2] of products and technology based on the type of product, the party that will use it, the destination of the export, and the end use. Technology includes technical data, such as blueprints and manuals, as well as services (including the transfer of knowledge) and training. In addition, the U.S. maintains economic embargoes against a number of countries whose governments violate human rights or act in support of global terrorism, and certain groups or regimes that do the same.

The three principal agencies that regulate exports from the U.S. are:

- The U.S. Department of State, Directorate of Defense Trade Controls (DDTC), which oversees and administers the ***International Traffic in Arms Regulations*** (***ITAR***) and the Arms Export Control Act (AECA);
- The U.S. Department of Commerce, Bureau of Industry and Security (BIS), which oversees and administers the ***Export Administration Regulations (EAR)***;
- The U.S. Department of the Treasury Office of Foreign Assets Control (OFAC), which administers ***economic sanctions and embargoes***.

There are other U.S. federal agencies, such as Customs and Border Protection (CBP), the Department of Homeland Security (DHS), the Nuclear Regulatory Commission (NRC) and the U.S. Department of Energy (DoE), just to name a few, that have jurisdiction over certain items and/or activities subject to export controls.

A. Export of Defense Articles and Services: International Traffic in Arms Regulations (ITAR)[3]

Under the ITAR, DDTC administers the export and re-export of defense articles, defense services and related technical data from the US to any foreign destination, or to any foreign person, whether located in the US or abroad.

Section 121.1 of the ITAR contains the United States Munitions List (USML), which annotates the commodities and related technical data and defense services controlled for export purposes. The ITAR controls not only end items, such as radar and communications systems, military encryption and associated equipment, but also the parts and components that make up the end item, or are otherwise incorporated into the item. Certain non-military

[2] The term "export" has a unique definition under the different regulatory regimes, and is therefore defined in detail in the relevant sections in this Manual.
[3] 22 C.F.R. Parts 120-1303

items, such as commercial satellites, and certain chemical precursors, toxins, and biological agents, are also controlled.

What is controlled under the ITAR?

The ITAR uses three different terms to designate export controlled items – defense articles, technical data, and defense services. With some exceptions, if an item contains any parts or components that are controlled under the ITAR, the entire item is controlled under the ITAR.

Defense Article – means any item or technical data that is specifically designed, developed, configured, adapted, or modified for a military, missile, satellite, or other controlled use listed on the USML. "Defense article" also includes models, mock-ups, or other items that reveal technical data that has significant military or intelligence applicability and is related to an item enumerated on the USML.

Technical Data - includes any information which is required for the design, development, assembly, production, manufacture, operation, repair, testing, maintenance or modification of a defense article. Technical data may include drawings or assembly instructions, blueprints, photographs, operations and maintenance manuals or documentation of such information. Technical Data includes classified information, information covered by an invention secrecy order, and software directly related to defense articles.

Technical data does *not* include general scientific, mathematical or engineering principles commonly taught in schools, information present in the public domain, general system descriptions, or basic marketing information on function or purpose.

Defense Service - includes providing assistance, including training, to a foreign person in the U.S. or abroad in the design, development, engineering, manufacture, production, assembly, testing, repair, maintenance, modification, operation, destruction, processing or use of a defense article, as well as providing technical data or demilitarization information or services to foreign persons. It also includes military training of foreign units and forces, regular and irregular, including formal or informal instruction of foreign person in the U.S. or abroad or by correspondence courses, technical, educational, or information publications and media of all kinds, training aid, orientation, training exercise, and military advice.

B. The United States Munitions List (USML):

The USML designates particular categories and types of equipment as defense articles and associated technical data and defense services. The USML divides defense items into 21 categories:

I. Firearms, Close Assault Weapons and Combat Shotguns
II. Guns and Armament
III. Ammunition/Ordnance
IV. Launch Vehicles, Guided Missiles, Ballistic Missiles, Rockets, Torpedoes, Bombs and Mines
V. Explosives and Energetic Materials, Propellants, Incendiary Agents, and Their Constituents
VI. Vessels of War and Special Naval Equipment
VII. Tanks and Military Vehicles
VIII. Aircraft and Associated Equipment
IX. Military Training Equipment and Training
X. Protective Personnel Equipment and Shelters
XI. Military Electronics
XII. Fire Control, Range Finder, Optical and Guidance and Control Equipment
XIII. Auxiliary Military Equipment
XIV. Toxicological Agents, Including Chemical Agents, Biological Agents, and Associated Equipment
XV. Spacecraft Systems and Associated Equipment
XVI. Nuclear Weapons, Design and Testing Related Items
XVII. Classified Articles, Technical Data and Defense Services Not Otherwise Enumerated
XVIII. Directed Energy Weapons
XIX. [Reserved]
XX. Submersible Vessels, Oceanographic and Associated Equipment
XXI. Miscellaneous Articles

Category XXI (21) is one of the broadest categories on the USML. It is a catch-all category which includes "*any other product, software, service or technical data with substantial military capability that was designed, developed, configured, adapted or modified for a military purpose*." Thus, in addition to items enumerated on the USML, the

ITAR controls any other article that has been specifically designed, developed, configured, adapted or modified for a military and that does not have "predominant civil applications."

- **Department of Defense funding and military end users.** For certain USML categories, one is required to consider (i) whether the work was funded by the Department of Defense (DoD) and, (ii) whether items developed during the research were designed for a "military end user" (e.g., the national armed services, national guard, national police, government intelligence or reconnaissance organizations, etc.) in making a USML-jurisdiction determination.

  To ensure that fundamental research sponsored by the DoD is excluded from the USML, Brown must indicate in all proposals to the DoD that any item being developed or built in the conduct of the research is being developed or built for both civil and military applications. Similarly, to ensure that a system or end item that is being developed during the course of Brown research is not considered "specially designed for a military end user" as defined in the USML, Brown must establish and maintain documentation contemporaneous with the development of the item, that it was developed with knowledge that it is, or will be for used, by both military end users and non-military end users. If, instead, the item was or is being developed with no knowledge of use by a particular end user, that should equally be documented.

- **Restrictions on Publication/Access/Dissemination.** It is imperative that University personnel understand that research will not be considered fundamental under the ITAR if (i) the University or its researchers accept restrictions on publication of scientific and technical information resulting from the project or activity, or (ii) the research is conducted with specific access and dissemination controls protecting the information resulting from the research (even if funded by the U.S. Government). This could include signing a Non-Disclosure Agreement or Confidentiality Agreement related to the research, or allowing a sponsor to pre-approve or otherwise dictate which results can and cannot be published.

C. When Am I Exporting under the ITAR?

The ITAR defines the term "export" broadly and it's important to understand that it is not restricted to physical goods nor is it restricted to transfers outside of the U.S. An export, as defined by the ITAR, means:

- Sending or taking of a defense article out of the U.S. in any manner, whether via shipment or hand-carry in your luggage;
- Disclosing or transferring technical data to a foreign person, whether in the U.S. or abroad;
- Performing a defense service on behalf of, or for the benefit of, a foreign person, whether in the U.S. or abroad. This includes, for example, teaching or training a foreign person how to design, develop, engineer, etc. a defense article, whether such training is done orally or by providing technical data.

With very few exceptions, the ITAR requires written authorization from DDTC in the form of an export license before exporting or re-exporting defense articles or defense services or engaging in "deemed exports" of ITAR-controlled technical data.

The ITAR includes a list of "proscribed countries" that are subject to U.S. arms embargoes. DDTC maintains a general policy of denying license applications for exports of ITAR-controlled items to the proscribed countries. The list of ITAR proscribed countries differs from OFAC's comprehensively embargoed country list. Additional information and guidance regarding the ITAR are available on DDTC's website.

D. Classifying ITAR articles: Commodity Jurisdiction

The Directorate of Defense Trade Controls (DDTC) determines if an article falls under the jurisdiction of the ITAR. If a specific article or service meets the criteria annotated on the USML **OR** if it provides the equivalent performance capabilities of a defense article on the USML, it is subject to the ITAR.

While DDTC encourages entities to self-classify an item under the USML, if there is any doubt as to whether an item is subject to the ITAR an official Commodity Jurisdiction (CJ) request should be submitted by Brown to DDTC via the Export Control Officer[4] (ECO). A CJ determination is most frequently pursued if an entity/individual is developing a novel piece of technology, software or system. A CJ is also frequently used when integrating parts and components into a new system that are generated by non-University parties. CJ determinations are based on the origin of the technology (i.e., is it of civil or military origin) and whether it is predominantly used in civil or military applications.

[4] Any reference to the Export Control Officer (ECO) throughout this manual means the University's appointed ECO and his/her designee(s).

If Brown self-classifies technology and makes an inaccurate jurisdiction determination, the University is liable for any resulting export control violations. Therefore, it is important that researchers who are developing novel technology and/or generating technical data to design such novel technology, contact the ECO as early in the process as possible. Incorrect self-determinations that are not verified by the ECO and which result in violations can result in personal liability and administrative actions taken against the individual.

E. Export of Commercial and Dual-Use Goods and Technology: Export Administration Regulations (EAR)

The Export Administration Regulations (EAR) are administered by the Department of Commerce, Bureau of Industry and Security ("BIS"). The EAR regulates the export of commercial and "dual-use" items. Dual-use goods and related technology, including technical data and technical assistance, are designed for commercial purposes, but could also have military applications. Supplement No. 1 to Part 774 of the EAR contains the Commerce Control List (CCL) which annotates the commodities and related technical assistance and technical data controlled for export purposes.

What is controlled under the EAR?

In general, any item made in the U.S., made outside the U.S. but with U.S. parts, technology, software, or know-how, or foreign made items brought to the U.S., will be subject to regulation under the EAR, unless the item is solely under another agency's jurisdiction (e.g., ITAR controlled). While almost every item located in the U.S. is subject to the EAR, only a small number of items require an export license.

EAR technical data may take forms such as blueprints, plans, diagrams, models, formulae, tables, engineering designs and specifications, manuals, and instructions written or recorded on other media or devices such as disk, tape, and read-only memories. EAR technical assistance may take forms such as instruction, skills training, working knowledge, and consulting services.

F. The Commerce Control List (CCL): The specific items controlled under the EAR are identified on the Commerce Control List ("CCL"), which is divided into the following 10 categories:

1. Nuclear Materials, Facilities and Equipment, and Miscellaneous
2. Materials, Chemicals, Microorganisms, and Toxins
3. Materials Processing
4. Electronics

5. Computers
6. Telecommunications and Information Security
7. Lasers and Sensors
8. Navigation and Avionics
9. Marine
10. Propulsion Systems, Space Vehicles, and Related Equipment

On the CCL, individual items are identified by an Export Control Classification Number (ECCN). ECCNs are five character alpha-numeric designations used to identify dual-use items and categorize them based on the nature of the product, i.e. type of commodity, software, or technology, and its respective technical parameters.

- **EAR99:** The regulations include an additional "catch-all" category, EAR99, which covers any goods or technology subject to the EAR, but not listed on the CCL. Items in the EAR99 category do not require a license for "list-based" controls, but may require a license based on embargoes, sanctions, receiving party or end use.

- **CCL & licensing**: For goods and technology listed on the CCL, a license from the Department of Commerce, Bureau of Industry and Security (BIS) may be required for export, depending on the country of destination, receiving party, and end use, unless an exception or exemption applies. The ECO should assist with evaluating whether a license may be required; the ECO or another authorized party (defined in Section V) will submit a license application electronically to BIS on behalf of the exporter when necessary.

  BIS licenses, if issued, are specific to the goods and/or technology listed in the license application, the end user, the end use represented in the license request, and the country of destination indicated. Many licenses are active for several years as long as the aforementioned elements remain unchanged. In some instances, BIS may require a written affirmation from the proposed end user that certain safeguards will be in place, and/or a declaration that the end use is non-military in nature. If such license contingencies are required, it is the responsibility of the exporter (i.e. the faculty member, student, or staff) to obtain the required affirmations in writing and provide the ECO with such documentation before the license is released.

G. When am I Exporting under the EAR?

Similar to the ITAR, the EAR definition of "export" extends beyond the transport of physical goods outside the U.S.

- An "**Export**" under the EAR means an actual shipment, transfer, or transmission of items subject to the EAR out of the U.S., or the release of technology or software subject to the EAR in a foreign country or to a foreign national abroad.
- A "**Deemed export**" is the release of technology or source code to a foreign national in the U.S. The release is "deemed" to be an export to the last permanent residence status/citizenship of the foreign national. This can occur through demonstration, oral briefing, site visit, or through transmission of non-public data.
- A "**Re-export**" is an actual shipment or transmission of items subject to the EAR from one foreign country to another foreign country. This would include a shipment of technology made from the U.S. by a Brown exporter to a specified foreign destination, which is then sent to a third country.
- Releasing or otherwise transferring technology or source code subject to the EAR to a foreign person of a country *other than the foreign country where the release or transfer takes place* is called a "**deemed re-export**." For example, this could mean that a German collaborator is sent controlled technology by a Brown researcher under a license (or license exception), but they may not release the technology to a Russian foreign national within her lab, without a deemed re-export license.

Similar to the ITAR list of proscribed countries, BIS maintains a list of sanctioned destinations. For goods and technology listed on the CCL, once the ECCN and reason for control is determined, the next step is to cross-reference the commerce country chart [15 EAR §738, Supp. 1] to determine if the reason for control applies to the relevant country. If it does, and no EAR license exceptions apply, then a license for the proposed shipment, release, or transfer is required.

H. Classifying under the EAR

BIS encourages self-classification of items using detailed descriptions of the goods or technologies. If the goods or technology are controlled under the EAR, but are novel and/or don't align with the precise specifications of a particular ECCN, then self-classification can present a challenge. In these instances, the exporter, through the ECO, can submit a Classification request to BIS (known as a CCATS) and receive a formal classification. Another option is to seek an Advisory Opinion, to which the exporter will

receive more general guidance regarding BIS interpretation of the EAR to assist with self-classification of an item.

If Brown self-classifies technology and makes an inaccurate jurisdiction determination, the University is liable for any resulting export control violations. Therefore, it is important that researchers who are developing novel technology and/or generating technical data to design such novel technology, contact the ECO as early in the process as possible. Incorrect self-determinations that are not verified by the ECO and which result in violations can result in personal liability and administrative actions taken against the individual.

I. Office of Foreign Assets Controls (OFAC)

The Department of the Treasury, Office of Foreign Assets Controls (OFAC) administers and enforces economic and trade sanctions against targeted foreign governments, individuals, entities, and practices based on foreign policy and national security goals. Trade sanctions may prohibit a number of activities of U.S. citizens abroad, such as the transfer of items and services "of value" and travel embargoes to sanctioned nations. OFAC maintains the list of embargoed/sanctioned countries and a summary of the embargoes, which can be found here.

OFAC also publishes a continuously updated list of Specially Designated Nationals ("SDNs") (the SDN list). This list includes both individuals and companies owned or controlled by, or acting for or on behalf of, targeted countries, as well as individuals, groups, and entities, such as terrorists and narcotics traffickers, designated under programs that are *not* country-specific. The assets of SDNs are blocked and U.S. persons are generally prohibited from dealing with them.

Importantly, some trade sanctions prohibit the export of "services," which OFAC broadly construes to mean providing anything of value, even if no money is exchanged. Examples could include teaching or lecturing, providing technical assistance, or conducting surveys and interviews in sanctioned countries or to SDNs.

J. Other Agencies with Export Regulatory Authority

While University personnel are more likely to encounter exports that fall under the ITAR, EAR or OFAC, the following agencies also have export control and licensing authority:

- **Nuclear Regulatory Commission (NRC)**, Office of International Programs, regulates exports of the radioactive materials listed in 10 CFR §

110.9 and/or the nuclear facilities/equipment listed 10 CFR § 110.8. Such export must be authorized by NRC under a general or a specific license issued in accordance with NRC regulations. If University personnel intend to engage in the transfer of technology in this area, they must contact the ECO for guidance in advance.

- **Department of Energy (DoE),** has statutory responsibility for authorizing the transfer of unclassified nuclear technology and assistance to foreign atomic energy activities within the U.S. or abroad. 10 CFR §810 implements the Atomic Energy Act of 1954 (the AEA), with regulations analogous to EAR controls on technology and ITAR controls on technical data and defense services. *Examples* of activities in the scope of Part 810 include: chemical conversion and purification of uranium, thorium, plutonium or neptunium; nuclear fuel fabrication; uranium or plutonium isotope separation (enrichment); nuclear reactor development, production or use of reactor components; development, production or use of production accelerator-driven subcritical assembly systems; heavy water production; reprocessing of irradiated nuclear fuel or targets containing special nuclear material; transfer of technology for the development, production, or use of equipment or material especially designed or prepared for any of the aforementioned activities. If University personnel intend to engage in the transfer of technology or provision of assistance in this area, they must contact the ECO for guidance in advance.
- **Department of Commerce, Bureau of the Census**, Foreign Trade Regulations mandate filing through the Automated Export System (AES) for all shipments requiring shipper's export declaration information. More information can be found here.

K. Compliance with Anti-Boycott regulations

Anti-boycott compliance refers to the provisions found in Part 760, Restrictive Trade Practices or Boycotts, of the Export Administration Regulations (EAR). This part prohibits U.S. persons from complying with boycotts that are not sanctioned by the U.S. and that contradict U.S. policy. Although they apply to any boycott not sanctioned by the U.S., they were primarily established by Congress to counter the Arab League's boycott of Israel.

The anti-boycott regulations apply to U.S. persons[5] (including certain foreign nationals) and prohibit U.S. persons from:

- Refusing "to do business with or in a boycotted country, business concern of a boycotted country, national or resident of a boycotted country, or with any other person" in compliance with "a requirement or request from or on the behalf of a boycotting country" (15 CFR § 760.2(a)(1));
- "Discriminatory actions based upon race, religion, sex, or national origin" (15 CFR § 760.2(b));
- "Furnishing information about race, religion, sex, or national origin" (15 CFR § 760.2(c));
- "Providing information about business relationships with boycotted countries or blacklisted persons" (15 CFR § 760.2(d));
- "Furnishing information about associations with charitable and fraternal organizations" (15 CFR § 760.2(e)); and
- "Implementing letters of credit containing prohibited conditions or requirements" (15 CFR § 760.2(f)).

Identifying and responding to reportable anti-boycott requests

Anti-boycott requests that are required to be reported may arise at Brown in the context of contracts, purchase orders, trademark applications, letters of credit, or any agreement that contains terms & conditions. Reportable anti-boycott requests must be reported to the Bureau of Industry and Security (BIS) quarterly, and must be kept on file at Brown for five years after the receipt of the request. A U.S. person who receives a request to take any action which has the effect of furthering or supporting a restrictive trade practice or boycott fostered or imposed by a foreign country against a country friendly to the U.S. or against any U.S. person must report the request to the Department of Commerce. At Brown, the ECO is available to assist with determining reporting requirements (see, also 15 CFR § 760.5), and to coordinate reporting to the Department of Commerce when required.

[5] A U.S. person is defined as "any person who is a United States resident or national, including individuals, domestic concerns, and 'controlled in fact' foreign subsidiaries, affiliates or other permanent foreign establishments of domestic concerns" (§760.1(b)(1)).

L. Export Control Violations

Violations of export control laws and regulations carry potential penalties **for the institution and the individual**, including substantial monetary penalties, potential criminal charges and imprisonment. Violations can also result in denial of export privileges under the EAR or the ITAR.

- Violations under the EAR can bring civil penalties of $300,000 per violation or twice the value of the transaction, whichever is greater, and criminal penalties of up to $1 million per violation along with up to 20 years in prison.
- Violations under the ITAR can bring civil penalties of $1,197,728 per violation and criminal penalties of up to $1 million per violation along with up to 20 years in prison.
- Violations under OFAC regulations can bring civil penalties of $91,816 per violation and criminal penalties of up to $1 million per violation along with up to 20 years in prison.
- There may be additional penalties from other regulatory authorities, based on the violation.

In addition to penalties from regulatory authorities, violations of Brown's policy may also be subject to disciplinary actions up to, and including, termination.

IV. BROWN UNIVERSITY'S APPROACH TO EXPORT CONTROL COMPLIANCE

A. Brown University's Mission

The mission of Brown University is to serve the community, the nation, and the world by discovering, communicating, and preserving knowledge and understanding in the spirit of free inquiry, and by educating and preparing students to discharge the offices of life with usefulness and reputation. The University does this through a partnership of students and teachers in a unified community known as a university-college.

In support of its mission, Brown is committed to Openness in Research, and fosters an environment of open and free academic exchange. It welcomes international students and scholars, promotes international collaborations, and engages in open exchanges within the global academic community. Brown has developed its export control compliance policy and procedures consistent with its mission and values, while demonstrating a sincere commitment to complying with all applicable U.S. laws and regulations.

B. Institutional Commitment to Compliance with Export Controls

Export controls apply to all persons in the U.S., and U.S. persons whether in the U.S. or traveling abroad. It is the responsibility of all *University personnel* (defined in Section II of this manual) to comply with export control laws and regulations, and with Brown's policy and procedures outlined herein.

Compliance with export control laws is an obligation and a commitment that Brown takes seriously. Failure to comply can result in significant institutional sanctions and penalties, in addition to reputational harm. All University personnel should understand and appreciate that violating export control laws and regulations may result in individual criminal sanctions, and it is therefore incumbent upon everyone at Brown to become familiar with these laws and regulations, Brown's Export Control and U.S. Economic Sanctions Policy, and Brown's procedures for operationalizing the policy.

Brown's commitment to compliance with all applicable U.S. export control laws and regulations notwithstanding, the University also upholds its mission of free and open research and scholarly exchange. To achieve this, Brown takes advantage of certain exclusions and exemptions that are available to accredited U.S. academic institutions that teach and conduct "Fundamental Research" and that are committed to making research results available through broad dissemination or publication and without access restrictions. Brown recognizes that there may, from time to time, be instances in which applicable U.S. laws and regulations stand at odds with the University's commitment to open exchange and sharing of knowledge. In these instances, the commitment to comply with U.S. regulations and laws will be upheld and will not be knowingly compromised.

C. Exclusions and Exemptions

1. Fundamental Research Exclusion (FRE)

In 1985, the U.S. government released the National Security Decision Directive 189 ("NSDD 189") in recognition that the strength of American science requires a research environment conducive to creativity, and an environment in which the free exchange of ideas is a vital component. NSDD189 established a national policy for controlling the flow of science, technology, and engineering information produced in federally-funded fundamental research at colleges, universities, and laboratories. It defines fundamental research as follows:

> "*Fundamental research means basic and applied research in science and engineering, the results of which ordinarily are published and shared broadly within the scientific community, as distinguished from proprietary research and from industrial development, design,*

production, and product utilization, the results of which ordinarily are restricted for proprietary or national security reasons."

Both the ITAR and the EAR provide that information published and generally accessible to the public through *Fundamental Research* is not subject to export controls.

Brown is dedicated to preserving the Fundamental Research Exclusion (FRE) for all sponsored awards. To qualify for the FRE, research at Brown must be conducted free of any publication restrictions and without any access or dissemination restrictions (i.e., no restrictions based on nationality). For example, the FRE may be nullified by any clause, regardless of sponsorship, that gives the sponsor the right to approve publications, restricts participation of foreign nationals in the conduct of research for national security reasons, or otherwise operates to restrict participation in research and/or access to and disclosure of research results. The EAR does allow prepublication review by a sponsor solely to ensure that the publication does not inadvertently divulge proprietary information furnished by the sponsor or compromise patent rights, which does not constitute publication restriction and may still qualify for the FRE.

Brown works to preserve the *Fundamental Research Exclusion* by reviewing terms and conditions of sponsored awards, Material Transfer Agreements (MTAs) and other research-related agreements to ensure such restrictions are not placed on the research. This is an integral part of Brown's export control compliance and ensures that we can uphold our mission of free and open academic exchange.

What could undermine the Fundamental Research Exclusion?

- The FRE could be jeopardized if investigators agree to any "side-deals" outside of the negotiated terms and conditions of an award or agreement. If, in practice, an investigator allows a sponsor (government, corporation, or other third-party) the ability to review and **approve** publications or to **restrict access** to the project or project results, they may lose the ability to take advantage of the FRE. Loss of the FRE can quickly put research in jeopardy of non-compliance with export controls.
- The FRE **does not** apply to items, equipment, technical data or software that are export controlled. When conducting research involving ITAR- or EAR-controlled hardware, software, technologies or encryption software, the FRE does ***not*** apply to such technology. This means that while the *results* of the fundamental research may not be subject to export controls, the export-controlled technology *used* in the fundamental research remains export controlled.

- The FRE **does not** apply to proprietary information that is marked "export controlled," or Controlled Unclassified Information ("CUI"), and that is incorporated into the research.
- Under the ITAR, research can only qualify for FRE if the research is performed at an *accredited institution of higher learning in the United States*. This means that the FRE **does not** apply if research is conducted at facilities that are not accredited institutions of higher learning or abroad.
- Under the EAR, research can qualify for the FRE even if it occurs at facilities that are not accredited institutions of higher learning or abroad (as long as the research meets the EAR's definition of "*fundamental research*").

2. Information that is publicly available

Neither the ITAR nor the EAR control information that is published and generally accessible or available to the public. While both the ITAR and the EAR are similar in scope, they vary in defining what type of information qualifies as "*publicly available.*"

The ITAR: "Public Domain"

Any information that is in the "public domain" is excluded from control under the ITAR (i.e., it does not meet the ITAR definition of technical data). The ITAR describes information in the *public domain* as information that is published and generally accessible or available to the public. Information in the public domain includes information available through:

- Sales at newsstands and bookstores
- Subscriptions which are available without restriction to any individual who desires to obtain or purchase the published information
- Libraries open to the public or from which the public can obtain documents
- Patents available at any patent office
- Unlimited distribution at a conference, meeting, seminar, trade show or exhibition, generally accessible to the public, in the U.S.
- Public release in any form after approval of the cognizant U.S. Government department or agency
- Fundamental research in science and engineering at accredited institutions of higher learning in the U.S. where the resulting information is ordinarily published and shared broadly in the scientific community.

- Note that "release on the internet" is **not** currently in ITAR's definition of "public domain."

The EAR: "Published"

The EAR does not control technology if it is already "published" or will be "published." Information is "published" when it becomes generally accessible to the interested public in any form, including:

- Publication in periodicals, books, print, etc., available for general distribution free or at cost
- Readily available at libraries open to the public or university libraries
- Patents and open patent applications available at any patent office
- Release at any open conference, meeting, seminar, trade show, or other gathering open to the public.

The EAR does not specify where an open meeting or conference or seminar or trade show must take place. As such, it allows for participation at a foreign conference so long as the conference is open to all technically qualified members of the public, and attendees are permitted to take notes. Unlike the EAR, the ITAR limits participation in conferences and similar events to those that are taking place in the U.S.

OFAC: "Information and Informational Materials"

"Information and informational materials" are generally excluded from the licensing requirements of most OFAC sanctions. The exclusion applies to "publications, films, posters, phonograph records, photographs, microfilms, microfiche, tapes, compact disks, CD ROMs, artworks, and news wire feeds." This provision only applies to already existing information. There can still be restrictions related to the creation of new publications.

3. Educational Information Exclusion

General educational information that is typically taught in schools and universities falls under the *Educational Information Exclusion* and is not controlled under the ITAR or the EAR. Specifically, this "teaching" exclusion allows for disclosure of information concerning general scientific, mathematical, or engineering principles ***commonly taught in schools, colleges, and universities*** [ITAR 22 CFR § 120.10(a)(5)] ***OR*** disclosure of information released by instructions in ***catalog courses and associated teaching laboratories of academic institutions*** (EAR 15 CFR §734.9).

- **Remote Teaching/Massive Open Online Courses (MOOCs):** OFAC regulates instruction delivered online, including via MOOCs, to individuals who are residents in, or ordinarily resident to, comprehensively sanctioned and embargoed countries in instances when such instruction is considered a "service."
  For example, OFAC permits participants from Cuba to engage in an online course, including a MOOC provided the course content is at the undergraduate level or below [in accordance with the Cuban Assets Control Regulations, CACR 31 CFR §515.565(a)(10)].
  Similarly, OFAC also permits participants from Iran to engage in an online course, including a MOOC, "*provided that the courses are the equivalent of courses ordinarily required for the completion of undergraduate degree programs in the humanities, social sciences, law, or business, or are introductory undergraduate level science, technology, engineering, or math courses ordinarily required for the completion of undergraduate degree programs in the humanities, social sciences, law, or business*" [in accordance with General License G(b)(1)(iii) under the Iranian Trade Sanctions Regulations ITSR, 31 CFR § 560].

  If intending to provide online instruction, including instructions via MOOCs, to:
  - graduate students in any field; or
  - undergraduate students in engineering, math or other STEM fields or a field related to defense technology, including weapons and space systems;

  such course instruction may require authorization or a license. University personnel must coordinate with Brown's ECO before launching any such course.

V. EXPORT CONTROL COMPLIANCE ROLES AND RESPONSIBILITIES AT BROWN

Brown University's export control compliance program is overseen by the Office of the Vice President for Research (OVPR) and administered by the Office of Research Integrity (ORI). Brown's ECO is responsible for the day-to-day operational management of Brown's export compliance program as outlined in this document. The ECO is also responsible for ensuring that the Export Control Compliance Manual (ECCM), Brown's Export Control website, and other documents are kept up to date. The ECCM and the website will

undergo, at a minimum, an annual review to ensure that the policies and procedures are current and consistent with export control laws and Brown's policies and procedures.

A. Key Offices and Personnel Responsible for Export Control Compliance

Below is a list of key offices and personnel that have a direct role in or are a functional component of Brown's export control compliance program. An organizational chart reflecting Brown's program is attached in Appendix A.

Vice President for Research

The Vice President for Research (VPR) is the Delegated Empowered Official for Brown's export control compliance program. In this capacity, the VPR has the authority to represent the University to external agencies in all matters pertaining to export control compliance, including, but not limited to, registration, licensing, classification requests, and voluntary disclosures. The VPR may delegate such authority to appropriate parties within OVPR has they see fit. Good faith reports of possible violation(s) of export control laws and regulations or institutional policy may be reported directly to the VPR. The VPR may become involved with investigations of noncompliance with export control laws and regulations and institutional policy and make recommendations and determinations, as appropriate, regarding institutional disciplinary actions.

The VPR reviews and approves any exceptions to Brown's commitment to open academic exchange, including granting approval for the use of certain export-controlled equipment and information.

Associate Vice President for Research

The Associate Vice President for Research (AVPR) directly oversees the Office of Research Integrity (ORI) and its programs, including the export control compliance program. The AVPR works closely with the Senior Director of ORI and the ECO to ensure Brown's compliance with all applicable export control laws and institutional policy.

Senior Director, Office of Research Integrity

The Senior Director of the Office of Research Integrity oversees the activities of the University's ECO. The Senior Director of ORI, together with the ECO, has direct day-to-day responsibility for administering all aspects of Brown's

export control compliance program. The Senior Director of ORI has the delegated authority to apply for export control licenses on behalf of the University and to represent the University to regulatory authorities in all matters pertaining to export control compliance.

Export Control Officer

Together with the Senior Director of ORI, the Export Control Officer (ECO) has direct day-to-day responsibility for administering Brown's export control compliance program. The ECO has the delegated authority to apply for export control licenses on behalf of the University. In the case of ITAR licenses, the ECO may work together with the Empowered Official on license submissions. The ECO is responsible for developing and implementing policies and procedures set forth in Brown's Compliance Manual. Moreover, the ECO:

- develops and implements procedures and internal controls to ensure that Brown remains in compliance with all applicable export control laws, regulations and institutional policy;
- identifies areas at Brown that are or may be impacted by export control regulations and designs a risk-based approach to assuring compliance;
- assists with classification of existing and novel technology, applies for licenses/authorizations, as needed, and documents utilization of certain license exemptions;
- educates the University personnel about export control regulations and procedures at the University;
- conducts training and outreach on export control compliance;
- monitors, interprets and implements relevant regulatory changes and recommends policies and procedures to senior administrators to adapt Brown's export control compliance program accordingly;
- liaises with Brown stakeholder offices on campus to facilitate understanding of and compliance with export controls;
- maintains the export control website and other available materials;
- develops and monitors Technology Control Plans for each export controlled project or item;
- refers any non-compliance or other violations to the Senior Director of ORI for review.

Research Compliance Manager

Reporting directly to the ECO, the Research Compliance Manager supports the ECO in the day-to-day administration of Brown's export control compliance program. The Research Compliance Manager works with the ECO

to develop and implement policies and procedures set forth in Brown's Export Control Compliance Manual.

B. Advisory Bodies and Offices

The Office of the General Counsel

Brown's Office of the General Counsel (OGC) provides counsel and serves as a liaison to the VPR and ORI on export control related matters, including, but not limited to, the interpretation and application of relevant laws and regulations; evaluation, investigation and reporting of violations of laws and regulations; and coordination with ORI on review of any contracts and agreements that may implicate export controls. The OGC advises in cases where compliance with export control laws may be at odds with other University policies or commitments (e.g., openness in research), and assists with determining institutional actions related to noncompliance.

Science and Security Working Group

Brown has established the Science and Security Working Group (SSWG), which reports to the Provost and the VPR, and is responsible for developing and assessing the University's policies, protocols, processes and compliance efforts related to undue foreign influence, research security, international visitors, collaborations, and export controls. Additionally, the SSWG provides feedback on legislation to help protect national and economic security while preserving fundamental research and international collaboration.

The SSWG established a subcommittee dedicated to providing guidance specifically on export control and sanctions regulations compliance at Brown University. This includes but is not limited to, the development of policies, guidelines, procedures, and education and outreach programs pertaining to export control compliance. The SSWG Subcommittee also advises and assists with facilitating communication and dissemination of information about export control compliance to the Brown community.

The SSWG's membership includes a diverse group of campus stakeholders, including representatives from the Office of the General Counsel, the Office of Government Relations, the Provost's Office, the Office of Sponsored Projects, the Office of International Scholar and Student Services, and the Office of Information Technology.

C. Offices with Operational Responsibility for Export Control Compliance

Office of Sponsored Projects (OSP)

The Office of Sponsored Projects (OSP) processes and administers all research projects sponsored by the U.S. and foreign governments, foundations and other non-profit entities in accordance with established policies of the University. OSP is critical in preserving Brown's ability to take advantage of the Fundamental Research Exclusion (FRE). OSP reviews research proposals and agreements carefully for provisions that might render the research ineligible for the FRE under the ITAR or the EAR, negotiates terms and conditions of awards to preserve the FRE, and engages ORI when questions arise about solicitations, award terms and conditions, and proposed purchases of research equipment that may impact export control compliance.

Brown Technology Innovation (BTI)

Brown Technology Innovation (BTI) handles all licensing agreements and agreements involving industry sponsors. BTI collaborates with ORI when industry-sponsored research solicitations, award terms and agreements, or other research-related agreements may invoke export control compliance issues. For all agreements (international and domestic) containing any type of export control text, BTI will first try to negotiate to remove the language or replace it with Brown ORI's standard export control language[6]. If unsuccessful, BTI will liaise with ORI to resolve the issue.

Office of Research Contracting (ORC)

The Office of Research Contracting (ORC) handles all Material Transfer Agreements (MTAs). MTAs enable investigators to receive materials from and transfer materials to other institutions and non-Brown collaborators. In negotiating MTAs, ORC aims to protect the rights and interests of Brown University, including rights to publish and openness of research.

ORC liaises with ORI to ensure that export control screening is conducted for both outgoing and incoming MTAs. For the transfer of tangible materials (e.g. in an MTA) or intangible information (e.g. a Confidential Disclosure Agreement): ORC uses Visual Compliance to screen the foreign entity for an outgoing transfer, whether it's to a research institute or to industry.

Office of Strategic Purchasing, Contracts and Insurance

[6] "Disclosing Party will not transfer any matters to Recipient that are (a) controlled under the U.S. International Traffic in Arms Regulations or (b) at a level other than EAR99, under the U.S. Export Administration Regulations. If any such matters to be disclosed hereunder have an Export Control Classification Number ("ECCN") other than EAR99, Disclosing Party shall first provide the ECCN to Recipient in writing. If Recipient expressly agrees to accept such matters, Recipient shall comply with all applicable export control laws."

The Office of Strategic Purchasing, Contracts, and Insurance ("Purchasing") reviews requisitions prior to approving purchases for goods or services above a certain monetary threshold (currently $5,000). Purchasing requests the ECCN from the vendor if the item falls into certain 'red flag' categories (i.e., those that may fall on the ITAR). If the ECCN is not EAR99, Purchasing refers the requisition to the ECO for further screening. Purchasing screens new vendors to ensure that the vendor is not listed on a restricted/denied party list. If the vendor may be restricted, Purchasing refers the requisition to the ECO for further screening.

Controller's Office

The Controller's Office oversees Purchasing Card (P-card) transactions, administers training to P-card users and conducts P-card related audits. The P-card policy expressly prohibits the purchase of ITAR-controlled technology using a Brown P-card. If you have any questions about the export control classification of the items you intend to purchase using your P-card, you should contact Brown's ECO for assistance. Misuse of the P-card may result in disciplinary action, up to and including termination.

Office of Environmental Health & Safety (EHS)

The Office of Environmental Health & Safety (EHS) oversees the shipment of biological and hazardous materials to domestic and international destinations. If University personnel seek to ship or transport biological or hazardous materials, consultation with EHS is required. EHS screens all materials that are to be shipped as well as end-users, and notifies the ECO if either a material or an end-user appears to be 'hit.' EHS holds all shipments unless and until clearance is provided from ORI to proceed with the shipment.

Office of Research Strategy and Development (ORSD)

The Office of Research Strategy and Development assists faculty and researchers at Brown with identifying research funding opportunities, establishing cross-disciplinary collaborations within the University, and submission of proposals to sponsors. ORSD staff engage ORI when assisting faculty with planning for and preparing research proposals that i) involve military sponsors or research partners, ii) involve "higher risk" research areas, such as engineering, space sciences or physics, and/or iii) involve the development of new technology.

Office of International Student and Scholar Services (OISSS)

The Office of International Student and Scholar Services (OISSS) advises and processes immigration documents for international graduate students and

certain groups of international scholars at Brown University. OISSS collaborates with ORI to facilitate the Deemed Export Attestation certification, which is part of the H1B/O1 visa application process, as well as the Foreign Scholar and Visitor Screening certification and process for J1 and B visa applicants. Through this process, the University ensures that parties are appropriately screened and the laboratories in which the students, scholars, visitors may be working/conducting research have the relevant controls in place, as needed, to enable foreign nationals to join the lab.

The Human Research Protection Program (HRPP)

The Human Research Protection Program (HRPP) is the administrative office dedicated to facilitating the submission, review and approval of research protocols involving human subjects. As part of the HRPP's pre-review of all submitted human subject protocol applications (regardless of funding source), staff informs the ECO of human subject research involving international travel. This enables the ECO to review research with potential export control implications that may or may not be funded by an external sponsor.

The Office of Global Engagement (OGE)

The Office of Global Engagement fosters international collaborations, international exchanges and global research. The Office of Global Engagement alerts the ECO whenever they facilitate bringing a group of international visitors onto campus that may require export control review. OGE also engages the ECO when reviewing international collaboration agreements or memoranda of understanding (MoUs) to ensure that Brown does not engage with any restricted entity or sanctioned party. OGE also refers students and faculty who are planning to travel to certain destinations, including sanctioned or embargoed countries, to the ECO.

The Office of the Dean of Faculty

The Office of the Dean of Faculty (DoF) issues invitation and appointment letters to international scholars coming to Brown. Visa application process for these scholars is handled by the Office of International Student and Scholar Services (OISSS) with the exception of Fulbright scholars, whose visa applications are handled directly by the Fulbright organization. Thus, the DoF sends copies of appointment letters issued to Fulbright Scholars directly to the ECO to confirm whether an individual is an SDN or a debarred party.

D. Export Control Licensing

If it is determined that an item, software, or service requires a license, Brown's ORI will work with University personnel to apply for a license via the relevant agency, as described below.

1. **EAR Licensing:** The Senior Director of ORI, the ECO, and the Research Compliance Manager have the authority to submit license applications and commodity classification requests to the Department of Commerce, Bureau of Industry and Security (BIS) on behalf of Brown. License applications for items controlled on the Commerce Control List are submitted electronically through the Simplified Network Application Process Redesign (SNAP-R) system. Whenever possible, ORI will identify and take advantage of license exceptions and will document utilization of those exceptions accordingly.

   Following receipt of a license application, BIS has 90 days to process the request. University personnel should plan accordingly. In submitting a license application, the authorized individuals rely on information provided by University personnel requesting exportation. It is the responsibility of University personnel to provide all requested information, and to ensure the information on which the license request is based is complete and accurate. Depending on the proposed item, destination and end-user, BIS may request additional supporting documentation, such as end-use certificates, delivery verification, and/or a written statement by the ultimate consignee. University personnel requesting the export are responsible for obtaining all required documentation and furnishing it to ORI, as well as for any costs associated with a license application and subsequent license, such as translation or notarization services.

   Once a license is received, University personnel are responsible for complying with the terms of the license.

2. **OFAC Licensing:** OFAC license applications and requests for interpretation are prepared by ORI or OGC. They are reviewed by OGC and the VPR, and are submitted electronically by the VPR, their designee, or OGC on behalf of Brown.

   Unlike BIS, OFAC does not have a standard form that must be submitted; instead, OFAC applications are submitted in letter form with supporting documentation. The ECO will work with University personnel to determine on a case-by-case basis what information should be included in

the OFAC license request. Whenever possible, ORI will identify and take advantage of license exceptions and will document utilization of those exceptions accordingly.

OFAC has historically taken many months and, in some cases, over a year, to issue specific licenses. ORI recommends submitting a license to OFAC *at least* six months prior to proposed travel; as such, University personnel should contact ORI at least a month in advance of that time to allow for preparation of the application and review by OGC. University personnel should plan accordingly. In submitting a license application, the authorized individuals rely on information provided by University personnel requesting to export. It is the responsibility of University personnel to provide all requested information, and to ensure the information on which the license request is based is complete and accurate. OFAC license applications typically include many supporting documents. University personnel are responsible for obtaining all required documentation and to furnish it to ORI, University personnel are also responsible for any costs associated with a license application and subsequent license, such as translation or notarization services.

Once a license is received, University personnel are responsible for complying with the terms of the license.

3. **ITAR Licensing:** Brown is registered with the Department of State, Directorate of Defense Trade Controls (DDTC) as of February 2017 and is therefore eligible to apply for licenses or utilize license exceptions for technology that is ITAR-controlled. License requests will only be made after formal approval is received by the Vice President for Research for the purchase of ITAR-controlled technology, or conduct of research that otherwise falls under the USML. Licenses are prepared by the ECO and/or the Research Compliance Manager, and are formally submitted to the DDTC by Brown's Empowered Official, the VPR. Licenses may take several months to be issued. University personnel should plan accordingly. University personnel are responsible for obtaining all required documentation and to furnish it to ORI, as well as for any costs associated with a license application and subsequent license, such as translation or notarization services.

   Once a license is received, University personnel are responsible for complying with the terms of the license.

E. Compliance Responsibilities of University Personnel and Centers/Departments/Institutes

University personnel

- All University personnel are responsible for understanding and complying with U.S. export control laws and regulations, Brown University's Export Control and Economic Sanctions Policy, and the procedures set forth in this Export Control Compliance Manual.
- University personnel must involve the ECO in certain situations, as outlined in in this manual. University personnel can, at any time, request assistance from the University's ECO in determining whether or not export controls apply in specific situations. University personnel can also request export control training at any time.
- When working with the ECO, University personnel are responsible for providing all information necessary to conduct an export control review. Required information and documentation may include (but is not limited to) contracts, research abstracts, technical specifications for technology, and the name of any foreign national that may be involved in their research or other activities.
- University personnel planning to travel to embargoed or sanctioned countries have an obligation to contact the ECO as far in advance as possible. If a license is required, University personnel are responsible for providing the ECO with all information necessary to submit a license application.

Centers/Departments/Institutes

Brown academic centers, departments and institutes are responsible for supporting the VPR, ORI, and the ECO in implementing procedures deemed necessary to ensure Brown's compliance with export controls. Centers, departments and institutes can mandate export control training for all or a sub-set of University personnel working or affiliated with them. In addition, centers, departments and institutes may implement additional measures and internal checks, if necessary, to further minimize the risk of non-compliance by its personnel.

VI. COMPLIANCE PROCEDURES AND RESPONSIBILITIES

A. Purchasing, Procuring, or Receiving export controlled items, materials, or software (collectively, "technology") for use at Brown

University personnel who wish to purchase or receive technology for use in research or other academic activities should be aware that most technology is subject to U.S. export controls. If technology is not controlled under the ITAR, it is controlled under the EAR.

- An item with a primary military application will likely be controlled under the ITAR.
- An item with both civil and military applications will likely be controlled under the EAR.

Vendors and manufacturers are not required by law to provide export control classification information to the purchaser; instead, in most instances, such information must be requested from the purchaser. Some vendors or manufacturers may provide export controlled information (i.e., an Export Control Classification Number [ECCN] or refer to an ITAR Category) or may reference "export controls" in quotes, sales agreements, terms & conditions, or purchase receipts. Vendors or manufacturers may also have export control classification information available on their websites (e.g., FLIR systems, Apple, Inc., etc.) to facilitate classification.

University personnel should request details directly from the vendor or manufacturer regarding the ECCN of technology they intend to purchase, or they may request assistance from the ECO in obtaining this information. In cases where a vendor or manufacturer explicitly references "export controls" in purchase documents, University personnel must follow-up and request USML or ECCN details or request that the ECO do so.

Purchasing or receiving ITAR-controlled technology

Brown's Export Control and U.S. Economic Sanctions Policy restricts the use of technology and technical data at the University that are enumerated on the USML and controlled under the ITAR. Any request for an exception to this policy must be made in writing to the Vice President for Research. The ECO will provide a ITAR Technology Request form and facilitate exception requests. Such exception requests must:

- Provide a rationale for why the ITAR-controlled technology/technical data is critical to perform the proposed research;
- Describe why an EAR equivalent cannot be used;

- Specify for how long/what part of the project the controlled technology/technical data will be used;
- Identify if any non-US persons currently or are planned to work on the proposed project;
- Identify the available access/security controls (i.e., physical segregation/access to technology, how technical data will be stored and appropriately safeguarded).

If the use of ITAR-controlled technology or technical data is approved by the VPR, the VPR's determination will be issued in writing and the project (or appropriate parts thereof) will be subject to a Technology Control Plan (TCP).

The purchase of ITAR-controlled technology using Brown University's Purchasing card (P-card) is expressly prohibited by Brown's P-card Policy.

Purchasing or receiving EAR-controlled technology
If University personnel purchase technology that is controlled under the EAR, the following is advised:

- **EAR99:** the purchase and use of items/equipment/software that are classified as "EAR99" is permissible without ECO review or notification. EAR99 technology has very few export restrictions. At present, EAR99 technology cannot be exported to sanctioned and embargoed countries/territories (i.e. Cuba, North Korea, Iran, Sudan, Syria, and Crimea Region of Ukraine) or to restricted entities without prior review by the ECO.
- **ECCN other than EAR99**: the purchase and use of EAR-controlled technology with an ECCN other than EAR99 is also generally permissible. If taken abroad *OR* if used at Brown in ways that would enable a foreign national to do **all** of the following - operate, install, maintain, repair, refurbish/overhaul the item - then an export license for either physical export or deemed export may be required. If either is anticipated, the ECO should be consulted before the technology arrives at Brown and/or is sent (or hand-carried) abroad.
- **ECCN 9x515 or 600 series**: special attention must be paid to EAR-controlled items with a classification of ECCN of 9x515 (e.g., 9A515) or 600 series (e.g., 8B**6**20). Purchasing EAR-controlled items with these classifications *requires* approval from the ECO because the transfer of technology for operation to many foreign nationals without a license would be a deemed export violation. The "600 series" classification is designated for

military items that were once subject to the ITAR. The 9x515 ECCNs describe "spacecraft" related items, and some radiation-hardened microelectronic circuits that were once subject to the ITAR under USML Category XV.

Internal Controls and Monitoring

The **Office of Strategic Purchasing, Contracts, and Insurance** ("Purchasing") identifies export control red flags in purchase orders, and flags requisitions for review by the ECO if:

- they contain any reference to "export controls," "ITAR" or "EAR";
- the purchase order is for items or equipment that may have tighter export control restrictions, such as infrared cameras, drones, special microscopes, GPS and navigation systems, satellites, or special software.

The ECO will review all flagged requisitions and, if necessary, work with Purchasing to obtain relevant export control classification numbers. Purchasing will put the requisition on hold until clearance is received from the ECO. The ECO will also advise University personnel who requested the purchase regarding applicable export controls or restrictions based on the technology's export control classification.

The Office of Research Contracting screens Material Transfer Agreements and alerts the ECO if the agreement contains any reference to export controls or requires export control review or if the destination is outside the US. The ECO works with the Office of Research Contracting to ensure the agreement terms are consistent with the conduct of fundamental research and that export-controlled materials (or data) will not be transferred to Brown without advance notice and Brown's explicit agreement to accept such transfer.

University personnel compliance responsibilities

- University personnel should obtain or seek assistance in classifying technology prior to purchase whenever such classification is unclear
- University personnel are encouraged to liaise with the University's ECO if an ECCN is anything other than EAR99
- As Brown does not permit the purchase of technology that is listed on the USML, it is each individual's responsibility to contact the ECO if proposing or requesting to purchase or receive technology that is controlled under the ITAR
- The VPR must approve the use of any ITAR-controlled technology or technical data. If University personnel propose to

purchase/receive ITAR-controlled technology, they must submit an exception request via the ECO.
- If the purchase of ITAR-controlled technology is approved, the technology will be subject to a Technology Control Plan (TCP), and University personnel on the TCP are required to abide by all safety and security measures described in the TCP.
- University personnel who receive an end-user agreement or certificate for signature, should consult with the ECO. Note: University personnel cannot sign these certificates on behalf of the institution.

B. Conducting Research at Brown

Classified research

Brown University does not accept classified data or research to be performed on campus.

Preserving the Fundamental Research Exclusion (FRE)[7]

Brown is highly committed to preserving its ability to take advantage of the "Fundamental Research Exclusion" (FRE) for all of its research projects as a U.S. institution of higher education. If research projects are conducted under the FRE, information and "software" that arise during, or result from, such research is **not** subject to export controls. The regulations set very specific conditions under which a research project qualifies as "fundamental research" and is thus excluded from export controls. If these conditions are not met or are violated, the research may become subject to export controls and, subsequently, increase the risk of non-compliance and violation of federal laws and regulations.

Conducting Research involving export controlled technology

While almost all research conducted at Brown falls under the FRE, the FRE does not apply to export controlled technology or technical data that the University receives from other parties and that is used in the research (e.g., research inputs). Non-US persons may not be able to participate in research involving export controlled technology, or technical data without a license, or may be excluded from such projects if a license is not granted by regulatory authorities.

Conducting Research involving Controlled Unclassified Information (CUI)

Controlled Unclassified Information (CUI) is government created or owned information that requires safeguarding or dissemination controls consistent with applicable laws, regulations and government wide policies. There are many

[7] See pp. 18-19 for detailed information about the FRE.

different categories of CUI , including financial, defense, law enforcement, immigration, and export controls.
Export controlled CUI are handled the same way as export controlled technology and data inputs. The assumption is that the underlying research is conducted under the FRE. University personnel wishing to work with export controlled CUI should contact the ECO for assistance in determining appropriate access/security controls (i.e., physical segregation/access to CUI, how CUI will be stored and appropriately safeguarded) and to implement a CUI Control Plan. If CUI are received in electronic format or stored electronically, University personnel must also work with the Office of Information Technology (OIT) Stronghold Team to set up a Stronghold environment in which to store the CUI before they arrive on campus. Non-US persons may not be able to participate in research involving CUI without appropriate authorizations, including licenses.

Conducting research with participation pre-approval requirements or participation restrictions.
University personnel conducting research where the sponsor requires pre-approval of any foreign national participating in the research (e.g., Department of Energy awards), must follow the process outlined by the Office of Sponsored Programs (OSP). If foreign nationals are not approved to work on the research award, the research may not be allowed to go forward. In cases, where an exception is made and the research is allowed to go forward, it will no longer be considered *Fundamental Research*. It will require a detailed export control review and analysis and, if necessary, an Export Control Compliance Plan. University personnel must adhere to all measures and requirements outlined in their Export Control Compliance Plan.

Developing new technology or technical data
If University personnel design, develop, and/or build new technology, OR refurbishes or disassembles technology that is export controlled, then the new technology will be subject to export controls. If University personnel develop new technical data that uses export controlled technology or technical data, then the new technical data will likely be subject to export controls. In such cases, a comprehensive review by the ECO is necessary to ensure that export control laws are not violated.

Internal Controls and Monitoring
The **Office of Sponsored Projects (OSP)** reviews research proposals and agreements carefully for provisions that might render the research ineligible for the FRE under the ITAR or the EAR. Specifically, OSP looks for the “red flags” below, indicating possible export control issues, paying special attention to proposals funded by the Department of Defense (including but not limited to Army, Air Force, and Office of Naval Research) the Department of Energy, NASA, and other U.S. government agencies:

- References to U.S. export regulations, other than standard language requiring Brown to comply with U.S. export control laws and regulations
- Restrictions on publication or dissemination of research results
- Pre-publication approval from a sponsor
- Indication from sponsor that export controlled, restricted or classified information will be provided for the research
- Proprietary or trade secret claims on project results
- Restrictions on access or participation to U.S. persons/citizens only
- Primary military application of the project results
- Research involves special equipment such as spacecraft systems, encrypted software, high-speed, infrared cameras, unmanned air vehicles, nuclear materials, lasers or sensors, toxins.
- Travel, shipping, or work performed outside the U.S.

OSP staff is trained regularly on export control compliance. If OSP identifies any "red flags" or other potential export control issues that they are not able to negotiate out of an agreement and/or they need further guidance, they refer the specific concerns to the ECO for review and consultation. ORI may involve the PI in its analysis. The primary goal of the review is to ensure Brown complies with its Export Control and U.S. Economic Sanctions Policy, obtains requisite VPR approval for exceptions involving ITAR-controlled technology, and preserves the FRE.

Applications to certain higher risk sponsors/higher risk funding mechanisms

Applications that are submitted for awards that may present a higher export control risk, such as an application for the Defense University Research Instrumentation Program (DURIP) or an application to the Department of Defense's (DoD) Multidisciplinary University Research Initiatives (MURI), are flagged via monthly report to the ECO for review. The monthly report is put together by the Research Administration Information Services Group (RAIS) and sent automatically to ORI staff. The purpose of the review is to identify potential export control issues and to engage with the investigator(s) as early as possible to ensure that the proposed research does not jeopardize the FRE. Any proposed research that potentially violates Brown's Openness in Research Policy and/or does not qualify for the FRE, must be explicitly approved by the VPR. The ECO will advise the VPR and investigator(s) on applicable export controls, restrictions around access by foreign persons, and other relevant requirements under the ITAR, the EAR or OFAC and implement a TCP when required.

Applications to a military funder – special requirements

Engaging in non-Fundamental Research on military sponsored projects implicates export control laws. Whereas Brown has established processes to evaluate and potentially permit the receipt of export controlled ***inputs*** in Fundamental Research projects at Brown, the conduct of ITAR-controlled, non-Fundamental Research projects, is prohibited at the University.

To ensure the Fundamental Research Exclusion is preserved for all military funded research projects, ORI in collaboration with OSP, developed explicit guidance and language to be included in sponsored research proposal documents when Brown is submitting as a prime or subcontractor on a Department of Defense (DoD) or other military sponsored proposal. Additionally, developmental items produced with DoD funding, including specially designed parts, components, accessories, and attachments may be subject to the ITAR (regardless of whether the overall project qualifies as Fundamental Research), unless these items are identified in the DoD agreement as being developed for both "civil and military applications".

To ensure developmental items are not subject to the ITAR, ORI in collaboration with OSP, developed explicit guidance and language to be included in sponsored research proposal documents when Brown is submitting as a prime or subcontractor on a DoD or other military sponsored proposal.

Export Control screening at submission stage

OSP administers a "Yes/No Questionnaire" with each research application that is submitted by the proposal PI to OSP for processing. On the questionnaire, the PI has the opportunity to self-identify any potential export control issues. The ECO receives a monthly report from OSP listing any proposal on which the PI has self-identified potential export control issues. The ECO may contact the PI, if additional information for analysis of possible export control issues is required.

Brown Technology Innovation (BTI) alerts the ECO whenever incoming agreements, including Non-Disclosure Agreements, contain references to export controls, publications restrictions, access restrictions or sharing of confidential/proprietary information/technology. The ECO will review the agreement and provide feedback. In some instances, the ECO will request additional information, from the investigator, about the proposed collaboration

(what is being shared, what is goal of the collaboration and what is the intent of the overall research). The purpose of the review is to make adjustments to contracts/agreements to protect the FRE and/or advise the investigator(s) on applicable export controls, restrictions to access by foreign persons, and other relevant requirements under the ITAR, EAR or OFAC. In some cases, ORI and the ECO will implement a TCP.

The **Office of Research Strategy and Development** engages the ECO when supporting faculty with the development of research proposals and collaborations involving i) military funders or collaborators, ii) export control "high-risk" research areas, or iv) development of new technology. The ECO works with the investigator(s) to identify potential export control risk areas and ensure compliance with all applicable regulations.

University personnel compliance responsibilities

- University personnel should carefully read any collaboration agreement, purchase agreement, and non-disclosure/confidentiality agreement sent by third parties to ensure that the FRE is not undermined by terms in any secondary agreements.
- University personnel are expected to accurately complete the PI questionnaire with each proposal submission to OSP; if the PI has questions about whether to affirm the export control question, he/she should contact the ECO for guidance.
- University personnel should not agree – in writing or verbally - to any publication or access/dissemination restrictions. Contact the ECO and OSP/BTI immediately if a sponsor/collaborator requests restrictions.
- The PI or his/her designee must contact the ECO if planning to design, develop or build new technology for primary military application OR if planning to develop or build new technology that includes ITAR-controlled technology or technical data.

C. Deemed exports: disclosing or transferring controlled technology, technical data, or providing services to a Foreign Person in the U.S.

While exports are commonly associated with tangible items being shipped or taken abroad, exports can occur within the U.S. in the form of the transfer of controlled information or providing services (including training) to foreign nationals. When such a transfer occurs, the export is "deemed" to be an export to the foreign national's country of citizenship.[8] Consideration of potential deemed exports is particularly important in a university research setting with students

[8] In the case of ITAR-controlled technology or provision of a defense service, one must consider ALL of the foreign person's countries of citizenship.

and scholars from around the globe and the free exchange of information and training.

A license may be required to release certain information or technical data to a Foreign Person in the U.S.. Examples of releases to a Foreign Person (known as a "deemed export") include providing access to controlled technology, enabling visual inspection or use of a controlled technology, providing access to a controlled technology via tours of facilities, and verbal or written exchanges (e.g., via email) of controlled technical data or information that grants access to controlled technology or technical data.

Internal Controls and Monitoring

In addition to the OSP controls outlined above that seek to preserve the FRE for all sponsored projects, additional offices at Brown partner with ORI and play a key role in identifying the potential for deemed exports.

The **Office of International Scholar and Student Services** **(OISSS**) alerts the ECO when advising and processing immigration documents for a graduate student or scholar from a comprehensively embargoed country. The ECO subsequently determines if the student or scholar will be in a research lab that i) is known to have controlled technology, or ii) works in an export control "high risk" area, such as engineering or physics. Depending on the outcome of the ECO's review, certain restrictions and safeguards may be put into place to ensure compliance with export control laws and regulations.

OISSS also works with the ECO to ensure the U.S. Citizenship and Immigration Services (USCIS) Form 1-129 "Deemed Export Attestation" for all new and extension H-1B petitions and O-1 petitions is completed. With this attestation the visa petitioner (i.e., the PI and the University) certifies whether a license or other government authorization is required for the release of export-controlled technology or technical data to the foreign scholar while in the U.S. during his/her employment. To meet this requirement, the Foreign Scholar and Visitor Screening form must be completed and signed by the PI, or other faculty or administrator responsible for overseeing the employment of the visa applicant, and by Brown University's or the affiliated hospital's ECO or other designee.

In addition, the ECO works with OISSS to screen certain foreign scholars and visitors coming to Brown University on J1 and B visas to ensure compliance with federal laws and to provide guidance and education to hosting departments and visitors on applicable export control and sanctions regulations. The screening process is primarily used to determine if a foreign scholar or visitor is a restricted national or is affiliated with a restricted country, group, entity, or organization. If the former, Brown cannot host/sponsor the individual; if the latter, the Office of Research Integrity (ORI) will provide specific guidance to the hosting department on regulatory restrictions related to hosting and interacting with the foreign visitor who is affiliated with a restricted party. ORI will also provide guidance to

the visitor to ensure that they do not accidentally violate any U.S. export control or sanctions laws while being here.

The screening process for visiting scholars on J1 and B visas is the same as for H1-B/O1 visa petitions. Hosting PIs/departments must complete and sign the Foreign Scholar and Visitor Screening form and submit it to the ECO for review and signature.

The **Office of Global Engagement** ("OGE") alerts the ECO if hosting a group of foreign visitors who may tour facilities or interact with faculty. The ECO screens the foreign visitors (to determine if any is a SDN) and follows up with the hosting faculty/departments when necessary.

OGE also alerts the ECO whenever Brown enters into agreements or Memoranda of Understanding (MOUs) with foreign entities or organizations. The ECO will screen the foreign entity/organization to determine if any of them are on restricted lists or are an SDN.

Departments/Centers/Institutes hosting scholars from embargoed countries must complete a Foreign Scholar and Visitor Screening Form and submit it to the ECO for review prior to arrival. The form must be completed and signed by the PI, or other faculty or administrator responsible for overseeing the scholar's visit, certifying that the information is correct to the best of their knowledge. The ECO determines whether a license or other government authorization is required for the release of export-controlled technology or technical data to the foreign scholar while in the U.S. during his/her visit. The host and visiting scholar may be required to sign additional documentation.

University personnel compliance responsibilities

- University personnel with controlled technology or technical data are responsible for preventing deemed exports without an appropriate license. You must contact the ECO if you want to release controlled technology or technical data to a Foreign Person in the U.S. The ECO will work with you to determine licensing requirements.
- If you are hosting visiting scholars, scientists, students, or trainees from comprehensively embargoed countries, you must complete the Foreign Scholar and Visitor Screening Form and submit it to the ECO for further review.

D. Shipping or hand-carrying export controlled technology or transmitting/bringing technical data abroad

Shipping or hand-carrying export controlled technology to a destination outside the U.S. may require an export license. Similarly, bringing a laptop abroad with technical data, controlled software or even certain types of

encryption on it may require an export license. University personnel must ensure that what is being carried or shipped does not require an export license, or if it does, work with the ECO to acquire a license in advance of planned travel. Even when no export license is required, the border/customs officers or shippers/freight forwarders may require you to provide export classification details. The ECO can provide a letter for University personnel affirming the export control classification and, when applicable, documenting any exemptions that the exporter is applying to bring/send technology abroad.

When is an export license required?

Any item that is either listed on the United States Munitions List (USML) or has an export control classification number (ECCN) other than "EAR99"[9] may require an export license depending on destination and proposed end-use. Manufacturers or vendors of products rarely provide export control classification information upfront, but will typically respond to requests for ECCN or USML category information.

While many items that are used on a daily basis fall within the "EAR99" classification, a number of items that are frequently used in academic research do not. In many instances an export license exception can be used to take these items abroad temporarily (to be returned to the U.S. upon the exporter's return), but it is always advisable to involve the University's ECO in determining whether an exception applies. In cases of ITAR-controlled technology or technical data, University personnel **must** engage the ECO in applying for an export license and/or to document any license exceptions.

Special requirements for export to China, Hong Kong, Russia, and Venezuela

University personnel who ship or hand-carry any item, including documents and materials, to China, Hong Kong, Russia, or Venezuela must comply with additional requirements under the EAR:

- Being able to provide Export Control Classification Information for ALL items that are exported (permanently or temporarily) to China, Hong Kong, Russia or Venezuela; and

[9] If the exporter is traveling to a comprehensively embargoed or sanctioned country (Cuba, Iran, N. Korea, Sudan, Syria, Crimea Region of Ukraine), they must engage the ECO even if only bringing EAR99 technology for the purpose of research.

- Filing of the Electronic Export Information (EEI) for certain items that are exported (permanently or temporarily) to China, Hong Kong, Russia, or Venezuela; and
  Conducting a military end-user/end-use review and certification for certain items listed on the CCL.

International shipping/freight forwarding

Brown has established relationships with preferred shippers/freight forwarders who work closely with the University and the ECO. When shipping technology with an export license, preferred shippers are authorized by Brown to handle necessary paper work and electronic reporting related to export licenses. Export licenses that are issued by BIS will be accompanied by a memo from ORI detailing shipping requirements.

In cases where no license is needed, international shippers may still require the correct export classification number or license exception code in order to ship the item. In cases where items are hand-carried, customs officers may, on occasion, require export classification number and license exception code. The ECO can provide a formal letter, containing export control classification number(s), license exception code(s) and a statement that the item received appropriate export control reviews, to accompany any item that is being shipped or carried. Providing incorrect information on international shipping documentations can lead to a shipment being held up or delayed. It can also result in fines and criminal penalties.

Brown Preferred Shipper/Freight Forwarders

For smaller shipments (<250 lbs)

FedEx or UPS

For larger shipments (>250lbs)

AIT Worldwide Logistics
370 McClellan Highway
East Boston, MA 02128
www.aitworldwide.com
Contact: Kevin Kist (kkist@aitworldwide.com)

Shipping hazardous or biological materials

When shipping biological or hazardous materials, University personnel must contact Brown University's Office of Environmental Health & Safety (EHS) and follow EHS procedures for shipping. EHS screens both the material and the end user and contacts the ECO if materials or end users may require an export license.

Shipping or hand-carrying technology to embargoed, sanctioned or otherwise restricted countries or end-users

Shipping or hand-carrying **any** technology, even those that are classified as "EAR99," to an embargoed or sanctioned country or to a restricted end-user is prohibited without review and approval from the ECO. The ECO will determine if the technology requires an export license. If export licenses are required, the ECO will facilitate the license application process.

Internal Controls and Monitoring

The **Office of Environmental Health & Safety (EHS)** screens materials consistent with current business processes for domestic and international shipments of research materials.

For domestic shipments, if EHS' screening produces a potential "hit," meaning that the material has a classification other than EAR99 and/or the recipient appears to be restricted/denied party, EHS contacts the ECO for further review. If the material being shipped has an export classification number with potential export restrictions, the ECO will provide a letter for inclusion with the shipment. The letter will reference the export control classification number, alert the receiving party of potential export restrictions, and specify that the material is to be used for research purposes only.

For International Shipments, if EHS' screening produces a "hit," meaning that the material has a classification other than EAR99 and/or the recipient appears to be restricted/denied party, EHS contacts the ECO for further review. The ECO will review to determine if the shipment can go forward and/or if a license is required. The ECO will provide, when appropriate, documentation including the export control classification of the material and license exemption code. In cases where the export requires a license, the ECO will work with the exporter to obtain a license on his/her behalf.

The Office of Research Contracting (ORC) reviews outgoing Material Transfer Agreements (MTAs) and alerts the ECO whenever materials are to be sent abroad via an MTA. The ORC screens the end user/recipient and materials to determine if the transfer involves restricted material, a

restricted or denied party, or sanctioned/embargoed country. If the material to be transferred is controlled under the EAR or the ITAR, relevant export control language is added to the agreement, including the export classification number (ECCN or USML, whichever applies).

The **Office of Strategic Purchasing, Contracts and Insurance (Purchasing)** notifies the ECO when it receives a request from University personnel to insure technology/equipment to be used for research outside the U.S. The ECO works with the individual who requested insurance to help classify the technology and determine if an export license is needed. If a license is required, the ECO will facilitate the license application process.

University personnel compliance responsibilities

- University personnel who wish to ship or hand-carry technology abroad must first ensure that the technology does not require an export license.
- University personnel can independently ascertain or verify a technology's Export Control Classification Number (ECCN) with the vendor, but must contact the ECO if the ECCN is anything other than "EAR99." As licenses can take several months, University personnel should contact the ECO well in advance of traveling/shipping.
- When shipping biological, chemical, or other hazardous materials OR when shipping technology that is encapsulated or shipped in biological, chemical or hazardous materials, University personnel must also follow shipping and handling policies and procedures implemented by the University's Office of Environmental Health & Safety.
- When activities, research, travel or collaborations involve an embargoed country, University personnel must contact the ECO as early as possible to discuss licensing requirements. University personnel should be familiar with the list of embargoed countries/regions.

E. Research and travel outside the U.S.

International research, travel and international collaborations and exchanges are vital components of academic life. As a leading global research university, Brown recognizes that international travel and research activities are fundamental to achieving its mission. While essential and valuable, these activities present potential export control compliance risks of which all University personnel should be mindful.

While international travel or field work in most countries does not require an export license, particularly if no research equipment is being taken abroad, tighter export controls are in effect for countries that are comprehensively

sanctioned or have restrictions on trade enforced by various departments of the U.S. government.

Travel to comprehensively embargoed countries

Travel to the following comprehensively-sanctioned countries/region requires advanced planning and coordination with the University's ECO.

- Cuba
- Iran
- North Korea
- Syria
- Crimea Region of Ukraine

When planning to travel to a comprehensively embargoed country for research, academic collaborations, and/or to present at a conference, University personnel must coordinate with the ECO as well in advance of the trip as possible. The ECO will work with you to determine whether a general license would apply to your proposed activities or begin the OFAC license application process. If the proposed activity takes advantage of a general license, there must be formal, internal documentation that includes a description of the proposed activity and the general license that is being applied. Travel under a general license to certain destinations may require additional paperwork and certifications from the University. The ECO will provide any required paperwork and will also provide the traveler with a list of generally allowable/ prohibited activities. The documentation must be signed by the ECO and any University personnel traveling to the embargoed country.

Travel to countries with no or limited sanctions programs

Travel to certain destinations will require coordination with the ECO, especially if equipment or special software is being taken abroad. Some destinations may have list-based sanctions in place or are included in the proscribed countries list. University personnel should contact the ECO in advance of traveling to the following countries/regions:

- Africa: Burundi, Central African Republic, Democratic Republic of the Congo, Libya, Somalia, Zimbabwe
- Middle East: Iraq, Lebanon, Yemen
- Europe: Balkans, Belarus
- South America: Nicaragua, Venezuela

Travel with research equipment, including laptops

Traveling outside the U.S. with certain items or equipment, including (but not limited to) scientific equipment, laptops, encryption software, cell phones, tablets, flash drives, cameras, and certain navigation systems, or thermal imaging cameras, may require a license or license exception depending on the travel destination. When taking these items abroad, University personnel need to ensure that the equipment or software does not require a license. The University's ECO can assist in determining license requirements. Below is some general guidance:

EAR99: most items with an EAR99 classification can be exported without a license. Do not export EAR99 items to Cuba, Iran, North Korea, Syria, or Crimea without prior consultation with the ECO.

Laptops, tablets & cell phones: most laptops, tablets and cell phones have an ECCN of either 5A992 or 4A994. This classification means that the equipment can be exported without a license to most countries. However, if University personnel plan to travel to embargoed or sanctioned countries with these types of devices, they must contact the ECO prior to the travel. In some instances, a license may be needed, which can take several months. It is important that the traveler not only consider the ECCN of the device itself, but ensure that there is no data/information on the device that is export controlled or sensitive (or if it is, that the ECO is informed to assess export license requirements).

Research equipment: if University personnel are planning to travel abroad with UAVs/drones, microscopes, thermal or infrared cameras, advanced GPS devices, or special software, they must contact the ECO well in advance of travel for equipment classification and license determination.

Software: most commercially available basic software (such as Microsoft Office) is EAR99 and can be exported on your device without a license. Proprietary software, software that includes encryption, and/or other complex software (unless developed during the course of a Fundamental Research project at Brown) may require an export license and must be reviewed by the ECO.

Export Requirements to China, Hong Kong, Russia, and Venezuela: University Personnel who ship or hand-carry any item, including documents and materials, to China, Hong Kong, Russia, or Venezuela must:

- file Electronic Export Information (EEI) for all items listed on the Commerce Control List (CCL) that are exported to

China, Hong Kong, Russia, and Venezuela, regardless of value. In order to fulfill this requirement, University Personnel must know and provide the correct Export Control Classification Number (ECCN) of the item that is being exported.

- Work with the Export Control Team to conduct an end-user/end-use verification and review when shipping or carrying items with certain ECCNs to China, Hong Kong, Russia, or Venezuela. ECCNs that require end-user/end-use verification are listed on Brown University's Export Control website.

ITAR-controlled technology: University personnel **cannot** take ITAR-controlled technology abroad, including software or technical data stored on a laptop, without a license. You must contact the ECO well in advance if you intend to take anything ITAR-controlled out of the U.S.

Cybersecurity & clean devices: University personnel should consider cyber-security and encryption restrictions when traveling to certain destinations. University personnel wishing to travel with clean devices (i.e., laptops or cell phones without any controlled software/information on them) can take advantage of Brown's Office of Information Technology (OIT) international loaner program. Interested parties should contact the ECO for more information.

Transiting between countries: export restrictions vary depending on the travel destination, which is why it is important to consider any transit stops as you travel to and from your final destination. While your final destination may not require an export license, your transit stop may. When transiting between countries, you may be asked to provide an Export Control Classification Number (ECCN) for each item you take. You must contact the ECO if you plan to travel with export-controlled technology and are transiting through an embargoed country.

Temporary imports, exports, re-exports, and transfers (in-country)

License exception "TMP" authorizes exports, re-exports, and transfers (in-country) of items for temporary use abroad when the exporter adheres to certain conditions. The TMP cannot be used in all instances where an export controlled item is to be taken abroad, even if taken temporarily. University personnel should check with the ECO if they are not certain if the TMP can be used for their

specific export. The TMP does not apply to items or data controlled under the ITAR and generally cannot be used for temporary exports to Iran, Syria, North Korea, Cuba or the Crimea Region of the Ukraine.

If the TMP can be used then all of the requirements listed below must also be fulfilled:

- The item is used abroad as a "tool of trade" for research purposes; AND
- The item remains under "effective control" of University personnel while abroad (defined as retaining physical possession of item or keeping it secured in a place such as a hotel safe, a bonded warehouse, or a locked or guarded exhibition facility); AND
- The item is returned to the U.S. within 12 months of the initial export; AND
- The item is not carried or shipped to Iran, Syria, Cuba, North Korea, or the Crimea Region of the Ukraine; AND
- The item is not using an encryption code other than those found in retail items (e.g., laptops with commercial software); AND
- The technology is not controlled under the ITAR.

Internal Controls and Monitoring

The **Human Research Protection Program** **(HRPP)** notifies the ECO whenever a proposed IRB study involves international travel. The ECO reviews the study and proposed international collaborator and contacts the study PI if or information is needed to assess potential export control risks.. If the proposed study involves a comprehensively embargoed country, the ECO will work with the study PI on determining license requirements and will facilitate, if necessary, the license application process.

The ECO has access to the Travel Tracker system to review destinations of Brown-affiliated travels. The ECO pulls a report on a monthly basis, and reviews this report. If a traveler is listed as going to a comprehensively embargoed country, the ECO contacts the traveler to discuss travel plans and license requirements.

University personnel compliance responsibilities

- If you travel outside the U.S. with technology or encrypted devices, it is your responsibility to ensure that the technology and/or devices do not require an export license and to work with the ECO if you are uncertain about licensing requirements.

- You can independently verify a technology's ECCN with the vendor. You should contact the ECO before you travel if the ECCN is anything other than "EAR99" if you are uncertain whether the country of destination will require a license or if you may use the TMP license exception.
- If University personnel plan to travel to a comprehensively embargoed country, they must contact the ECO as far in advance as possible to assist with a determination of any license requirements.
- If University personnel plan to travel to countries with a limited sanctions program, they are strongly encouraged to contact the ECO for assistance with a determination of potential license requirements.
- University personnel are solely responsible for obtaining any necessary in-country research-related permits and complying with import requirements for their country of destination.

F. International Collaborations

Collaborations between University personnel and collaborators/scholars at foreign institutions or organizations typically do not require an export license or specific approvals by the ECO, *unless* they involve export controlled or otherwise restricted research or involve scholars in sanctioned countries. Before engaging in an international collaboration, Brown needs to verify that the foreign individual or organization is not a blocked or sanctioned entity (a "restricted party"). The sharing of knowledge or technical expertise in embargoed countries (e.g., as a keynote speaker, visiting lecturer, etc.) may also invoke export licensing requirements.

ITAR and international collaborations

The ITAR does not consider research "fundamental" when it occurs outside a U.S. accredited institution of higher learning. Furnishing assistance (including training) anywhere (inside the U.S. or abroad) to foreign nationals in connection with the design, development, engineering, manufacture, production, assembly, testing, repair, maintenance, modification, operation, demilitarization, destruction, processing, or use of defense articles OR furnishing ITAR-controlled "technical data" to non-U.S. persons , requires authorization from the DDTC. While transfer of public domain information is not a defense service, the DDTC has commented in the Federal Register that "it is seldom the case that a party can aggregate public domain data for purposes of application to a defense article without using proprietary information or creating a data set that itself is not in the public domain." (78 FR 31445). It is therefore imperative that University personnel contact the ECO if they propose to engage in any training/assistance to foreign persons while abroad that may implicate the ITAR. The ECO will apply for a necessary license or may determine that the proposed activities will be prohibited by the DDTC.

Internal Controls and Monitoring

The **Office of Strategic Purchasing, Contracts and Insurance** screens new vendors/contractors/consultants on sponsored research projects and informs the ECO if there is a "hit" to enable the ECO to evaluate compliance with export control regulations. The **Office of Sponsored Projects (OSP)** generates a quarterly report for the ECO that lists all sponsored research projects administered through Brown that involve international collaborations or foreign travel. The report is primarily used to identify potential collaborations with or travel to comprehensively embargoed countries. The ECO then takes a risk-based approach in using these data to determine if/when follow up is needed with the project PI.

The **Office of Global Engagement** notifies the ECO if it is involved in organizing or facilitating any project with global collaboration.

University personnel compliance responsibilities

- If University personnel travels outside the U.S. with technology or encrypted devices, it is their responsibility to ensure that the technology and/or devices do not require an export license and to work with the ECO if they are uncertain about licensing requirements.
- University personnel must contact the ECO if they propose to engage in any training/assistance to foreign persons while abroad that may implicate the ITAR.
- If University personnel plan collaborations with or in a comprehensively embargoed country, they must contract the ECO as far in advance as possible to assist with a determination of license requirements.

G. International Financial Transactions

The Treasury Department's Office of Foreign Assets Controls (OFAC) administers and enforces economic and trade sanctions based on U.S. foreign policy and national security goals against targeted foreign countries and regimes, terrorists, international narcotics traffickers, those engaged in activities related to the proliferation of weapons of mass destruction, and other threats to the national security, foreign policy or economy of the U.S. OFAC has over 20 current sanctions programs. To ensure compliance with OFAC sanctions and other restricted transactions, Brown's Office of Insurance and Purchasing Services screens all new vendors/contractors/consultants, and informs the ECO if there is a "hit" to enable the ECO to evaluate whether and under what circumstances Brown can proceed with engaging in a specific financial transaction.

H. Restrictive Trade Practices and Boycotts

The Export Administration Act prohibits U.S. Persons or businesses from participating in any non-U.S. sanctioned foreign government boycott. The purpose of such prohibition is to prevent U.S. organizations and entities from supporting or participating in foreign policies of other nations that run in a manner contrary to U.S. policy. If Brown receives any agreements or requests or contracts that include restrictive trade practices or boycotts, it is obligated to report those to the Department of Commerce.

The U.S. Department of the Treasury maintains a list of boycotting countries; certain operations in these boycotting countries must be reported. If through Brown research University personnel are planning to conduct any activities or business transactions in one of the countries on the Treasury Department list, the PI should contact the ECO.

Boycott-related activities prohibited by the U.S. Department of Commerce include:

- Refusing or requiring others to refuse to do business with or in a boycotted country, with a national of a boycotted country, or with a boycotted person;
- Refusing to employ or otherwise discriminating against a U.S. person, in deference to a boycott request, on the basis of race, religion, sex, or national origin;
- Furnishing information, in response to a boycott request, about the race, religion, sex, or national origin of a U.S. person or any owner, officer, director, or employee of a domestic concern or any of its "controlled in fact" non-U.S. affiliates;
- Furnishing information about any person's past, ongoing, or proposed future relationships (or the absence of relationships) with other parties, if that information is sought for boycott-related reasons;
- Furnishing information about any person's association with or support for any charitable or fraternal organization supporting a boycotted country; and
- Paying, honoring, confirming or otherwise implementing a letter of credit that contains any prohibited boycott requirement or request.

Internal Controls and Monitoring

The **Office of Sponsored Projects** and **Brown Technology Innovations** review incoming agreements and flag any potential anti-boycott provisions or restrictive trade clauses for review and, when required, reporting.

University personnel compliance responsibilities

- If University personnel receive a request (written or verbal) or agreement/contract that supports a restrictive trade practice or boycott imposed by another country, they must promptly report the request to the ECO who, in turn, is obligated to review and, when required, report it to the Department of Commerce.

I. Export Control Red Flags

University personnel should be aware of certain situations that present export control "red flags" as they may necessitate contacting the ECO for review. These include, but are not limited to, those listed below. University personnel are encouraged to contact the ECO whenever they have a question about export control compliance, not just in the following situations:

- Transfer/shipments of equipment, materials, or funding to a foreign country
- Training or collaboration with foreign nationals from comprehensively embargoed/sanctioned countries
- Research activities performed in a foreign country
- Reference to export controlled technologies in a collaborator's or sponsor's email or verbal communication
- Restrictions on publication rights, foreign nationals' participation, and/or dissemination of research results in any type of agreement, or raised during any written or verbal communications with a sponsor or collaborator
- Sharing/shipping encryption Source Code abroad
- Using any item, information or software during the course of your research that is:
    a. Designed or modified for a military use
    b. For use in outer space
    c. Suspected use in/for a weapon of mass destruction (nuclear, chemical, biological, missiles)
- An international collaborator is reluctant to offer information about the end-use of a product
- When questioned, a collaborator is evasive or unclear about whether the technology is for domestic use, export, or re-export
- Receipt of unsolicited emails from individuals outside the U.S. requesting assistance with modifying existing technology or software or requesting training/guidance in modifying technology or software for a potential military purpose

- Asked to sign an end-user agreement/certificate
- Asked to provide citizenship verification to an outside entity

VII. ITAR AND BROWN'S TECHNOLOGY CONTROL PLAN (TCP)

A Technology Control Plan (TCP) is implemented whenever items listed on the United States Munitions List (USML) regulated by the International Traffic in Arms Regulations (ITAR) are used by University personnel. A TCP is required by law. The purpose of a TCP is to control the access and dissemination of export controlled information, materials, technology, and data in accordance with federal export regulations. A TCP ensures that everyone working on the project understands their obligations under the export control laws and regulations.

The TCP designates the person at Brown responsible for maintaining and monitoring compliance with the TCP as well as the appropriate location, use, security and access of each applicable item. The TCP contains a description of the ITAR controlled technology/technical data to be safe-guarded and the security measures taken to prevent unauthorized access. Any personnel listed on a TCP will undergo citizenship verification, specific to compliance with export control laws. The TCP will remain in effect as long as the ITAR controlled materials covered by this plan remain at Brown or are otherwise used by University personnel.

The TCP is signed by the PI, who is the individual responsible for ensuring compliance by all project personnel (to be listed on the TCP) with the measures outlined in the TCP. The ECO counter-signs the TCP. A TCP must be implemented **prior** to the arrival of any ITAR-controlled technology at Brown. A template of Brown's TCP can be found in the appendix of this manual.

A. A. Computer Information Systems & Security

Brown's "Security Guidelines and Data Classification Policy" outlines the University's three levels of data classification. ITAR-controlled technical data and software are retained at the "Level Three Risk" protection and require a Stronghold account. ITAR-controlled technical data must be stored in Stronghold and must be handled in accordance with the terms and conditions set forth in an individual's Stronghold agreement/Memorandum of Understanding.

B. Physical Security

While many offices and laboratories on campus provide restricted access via swipe-card and/or key-lock, some research buildings and facilities are accessible during the day, allowing freedom of movement for members of the Brown community.

Brown typically requires that ITAR-controlled technology/software be access-controlled via two modes of security. For example, a laboratory with controlled technology may have a key-lock (with key access restricted to lab members only), and the technology itself is stored within a locked drawer within the laboratory to which only the PI has access. For software, an office may be located within a key-card access only building, and the computer on which software is loaded requires a password known only to those on the TCP. The ECO will work in collaboration with the PI and Facilities Management to ensure appropriate physical security. In some instances, additional or new locks may have to be installed or access is restricted to particular Brown IDs.

C. Training

University personnel subject to a TCP must complete an initial in-person or online export control training when the TCP is implemented, and are required to complete follow up trainings annually. In addition, the ECO will monitor compliance with the TCP and confirm its accuracy on an annual basis with the PI. It is the PI's responsibility to contact the ECO if any changes need to be made to the TCP during the course of the year. The ECO will review the proposed changes (e.g., changing physical location, adding/removing personnel) and provide approval in writing for the change to occur. Only then may the change(s) be implemented.

VIII. Other Control Plans

The ECO and their designee(s) may implement other control plans, including, but not limited to, a control plan for certain EAR technology and a control plan for certain Controlled Unclassified Information (CUI).

The purpose of these control plans is to protect and limit access and dissemination of export controlled information, materials, technology, and data in accordance with federal export regulations. A formal control plan ensures that everyone working on the project understands their obligations under the export control laws and regulations.

Control plans contain a description of the controlled technology, technical data, or CUI to be safe-guarded and the security measures taken to prevent unauthorized access. A control plan is signed by the PI or project director, who is the individual responsible for ensuring compliance with the terms and conditions of the control plan by all project personnel. The ECO counter-signs the control plan. Control plans should be implemented **prior** to the arrival of the controlled technology at Brown.

Student Groups

Some student groups, such as Brown Space Engineering, require these control plans for their projects which include building and launching CubeSats. Much of their work is covered by the FRE or the Educational Information Exclusion, but the tangible items produced in the course of their activities can be export controlled. The ECO and their delegates will work with the student group to clearly define the export control risks throughout the course of the project. For student groups, responsibility for the control plan rests with the faculty sponsor and the student group leadership.

Training

Training is required of all University personnel involved in the controlled project. The ECO will tailor the frequency and content to the project and personnel. It is the responsible faculty member's responsibility to contact the ECO if any changes are needed or new project team members join. Control plans are subject to annual or semi-annual review depending on the project scope.

IX. TRAINING AND EDUCATION

Training and education are the foundation of a successful export control compliance program. Having well-informed faculty, staff and students minimize the likelihood that a violation of export control laws and regulations will occur, which is protective of both the individual and the University. Brown's export control education program takes into account the University's diverse community and variety of academic departments and research disciplines, and therefore does not take a "one-size-fits-all" training approach.

Brown's Export Control Compliance website

Brown's export control compliance website is a resource available to all University personnel and to any external sponsors/collaborators that wish to learn more about the University's approach to export control compliance. University personnel should use the website for up-to-date information about Brown's compliance program and educational offerings, and for self-guided education regarding export control laws and regulations. University personnel are encouraged to refer external sponsors and collaborators to Brown's export control compliance website and/or to the ECO with questions about how Brown implements its compliance program and strives to maintain the FRE in all research conducted under the auspices of Brown.

Mandatory Training

Training is mandatory and coordinated through ORI when:

- You are subject to a Technology Control Plan (TCP) - you must complete an initial training, followed by annual refresher trainings;
- You violate U.S. export control laws and regulations and/or University policy – frequency and content of the training will be dependent on the violation;
- Assigned by individual departments, groups or offices on an as-needed or risk basis.

Optional Training (available to all University personnel)

A list of all training options offered by ORI, including individual one-on-one training by request, are available on Brown's Export Control website.

- **Basic Export Compliance training** is for any University personnel seeking to understand export control regulations and how they apply in a university setting. This training is an online training course offered for administrators and researchers through TrainCaster or in-person via Brown Bags or Lunch-time presentations.
- **Advanced Export Compliance training** is for any University personnel, and builds upon the basic session. This course is particularly relevant for personnel that conduct research in export control high risk areas, such as engineering, planetary and earth sciences, and physics, or research that is funded by and/or collaborates with military agencies and organizations. This course is offered in person.
- **International travel/Research training** is for any University personnel and is geared toward those conducting and/or supporting international research. This training is particularly helpful for those who travel internationally for research, collaborations, or for presentations. This course is offered online through TrainCaster and in person.
- **Customized in-person training** is offered to any University personnel requesting in-person training, and will be tailored to your specific needs. Customized programs can be offered to individual laboratories, department administrators and their teams, and even given one-on-one. This training is offered in person.
- **Administrative Offices Training** is offered for all offices that have been identified as being part of the export compliance program (see Key Offices, Operational Departments). This is an online course offered through Brown's TrainCaster system, and can be augmented with in-person session(s).

Training for the ECO/ORI staff

The ECO and other export compliance personnel are expected to continue their training and keep abreast of evolving export control regulations through webinars, workshops,

conferences, professional associations and other teaching or reading materials. University leadership is committed to ensuring resources are made available to support such continuing education.

Senior leadership briefings

ORI provides the Vice President for Research, the Assistant Vice President for Research, and other senior leadership as needed (e.g., Provost, Vice President and General Counsel, etc.) updates and an annual briefing on export controls, including changes in regulations and their impact on University research, risk areas and trends within the University, and any areas of the export control compliance program that require heightened attention and/or resources.

X. MONITORING AND AUDITIING

ORI is responsible for monitoring compliance with export control laws and regulations and University compliance with University Policy and this manual. In addition to monitoring described throughout this manual, other monitoring activities are conducted regularly.

Visual Compliance

Brown uses Visual Compliance software to conduct the following screening and monitoring functions:

- Restricted party screening (i.e., to screen for SDNs, debarred parties, etc.)
- Screening of technology, including products, materials and software to assess export compliance classification and license determination;

Visual Compliance is used by EHS, Finance, Purchasing, ORI, OSP, Advancement, BTI, ORC and some academic departments. This auditable system records each search conducted by Brown and also runs a "dynamic screen" nightly to compare any new additions to restricted party lists maintained by various agencies (e.g., OIG, OFAC, Department of Commerce, FBI), with all prior run searches at Brown. Whenever there is a match, Visual Compliance automatically notifies the ORI. ORI staff will clear each "hit" in accordance with the established internal SOP.

Equipment Inventory

Brown's Office of the Controller conducts a biennial property inventory. The ECO reviews the inventory list after each biennial inventory is complete for controlled technology that may not have been identified via other internal controls. Technology

that may be export controlled will be classified by the ECO and if the technology is controlled then the PI or other responsible party will be notified of its classification. If any technology is determined to be controlled under the ITAR and is not already subject to a Technology Control Plan, a TCP will be implemented. Other control plans will be implemented as needed.

Internal Audits

Brown's export control compliance program is subject to audit conducted by the Office of Internal Audit Services in accordance with its audit and evaluation schedule. Results of internal audits are provided to senior leadership and the ORI, for deficiencies to be promptly rectified and best practices and recommendations for improvement operationalized.

XI. DETECTING AND REPORTING VIOLATIONS

University personnel that observe, notice, or suspect an export control violation have an obligation to report it to the ECO, the Director of ORI, and/or the Vice President for Research. Reports can also be made via Brown University's confidential and anonymous third-party hosted Ethics and Compliance Reporting System. All reports of violations or suspected violations of export controls will be reviewed. If an investigation is warranted, the Office of the Vice President for Research will lead the investigation, with involvement/advisement from OGC and internal audit services, as needed. If it is determined that University personnel violated export control laws and regulations and/or University policy, the individual may be subject to disciplinary action by the University.

XII. DISCIPLINARY ACTIONS FOR NONCOMPLIANCE

If, upon internal review and investigation, it is determined that University personnel violated export control laws and regulations and/or University policy, the individual may be subject to disciplinary actions in accordance with standard University policies and procedures. Factors that will be considered in evaluating and implementing disciplinary action may include:

- Whether the individual knowingly violated export controls;
- Whether the individual repeatedly violated export controls;
- The severity of the violation; and
- Whether the individual cooperated during the investigation and has complied or has agreed to comply various corrective actions.

At a minimum, the individual who was found to be non-compliant will receive mandatory export control training. Other possible disciplinary actions may include notification of the individual's supervisor, prohibition from engaging in certain export-

related activities; prohibition from receiving certain technology or using certain technology in the conduct of research.

XIII. EMPLOYEE PROTECTION/NON-RETALIATION

Brown's Non-Retaliation policy prohibits taking any retaliatory action for reporting or inquiring about alleged improper or wrongful activity, including non-compliance with export controls. Any retaliatory action covered under Brown's Non-Retaliation policy may be subject to disciplinary action, up to, and including, termination. The University will review complaints of retaliation in accordance with the Non-Retaliation policy.

XIV. RECORDKEEPING REQUIREMENTS

Brown must retain certain documentation related to export controls in accordance with time periods set forth under applicable U.S. laws and regulations. The ECO has primary responsibility for retaining copies of export-related documentation, including, but not limited to, analyses of license requirements and related correspondence, all correspondence with government agencies pertaining to export control compliance, including notes and memoranda, and Technology Control Plans, for a minimum of five years from the date of export, re-export or transfer. Departments, programs and University personnel are also responsible for retaining export-related records and documentation, such as licenses and shipping documentation, for a minimum of five years from the date of export, re-export, or transfer. Records may be kept as electronic files or hard copies.
Retention schedules for specific export control documents are noted below.

Technology Control Plans (TCPs) & related documents	Records retained for 5 years after TCP termination date
Export license analyses, license applications & related documents	Records retained for 5 years after license expiration date
Export license exception analyses, self-classification of technology, and related documents	Records retained indefinitely
Visual Compliance searches	Records retained indefinitely within Visual Compliance system
Export control training attendance records & sign-in sheets and copies of training provided	Records retained for 10 years following training

XV. ADDITIONAL RESOURCES

- Brown University's Export Control website
- U.S State Department – International Traffic in Arms Regulations (ITAR), 22 C.F.R. §§ 120 – 130
- U.S. Department of Commerce – Export Administration Regulations (EAR), 15 C.F.R. §§ 730 – 774

- U.S. Bureau of Industry and Security (BIS)
- U.S. Treasury Department – Office of Foreign Assets Control (OFAC), 31 C.F.R. §§ 500 -599
- National Security Decision Directive 189 (NSDD 189)