

EXPORT CONTROL BASICS FOR RESEARCHERS





WHAT ARE EXPORT CONTROLS?

“Export Controls” are a set of *federal laws & regulations* that regulate the transfer of **information, commodities, materials, technology, and software** considered to be strategically important to the U.S. in the interest of national security, economic, and foreign policy concerns.

Export Controls concern shipments/transfers **out of the U.S.** and transfers to foreign nationals **within the U.S.**

WHAT ARE INTERNATIONAL SANCTIONS PROGRAMS?

International sanctions programs apply broadly to transactions with sanctioned countries and specially designated individuals. Prohibited activities vis-à-vis sanctioned countries and specially designated individuals often include the export and re-export of goods, technology, and services. In some instances, travel may also be prohibited.

WHY LEARN ABOUT EXPORT CONTROLS?

You may be asking yourself why Export Controls have any relevance to what you do at Brown. As a researcher working at a university, you may be interfacing with Export Controls more often than you think.

In fact, all of the following activities may involve Export Controls:

- collaboration and exchanges with colleagues abroad;
- conducting research in other countries;
- using novel or advanced technologies in research;
- supervising and mentoring foreign students.

WHY LEARN ABOUT EXPORT CONTROLS?

Awareness of applicable regulations and knowledge of Brown's internal compliance procedures are your responsibility, particularly if you do any of the following:

- Ship materials to researchers abroad;
 - Purchase special research equipment;
 - Travel to, or engage in, collaborations with embargoed/sanctioned countries;
 - Work with military sponsors (Department of Defense, Office of Naval Research);
 - Collaborate with industry partners.
- **Universities and all individuals in the U.S. must comply with export control laws.**
- **Ignorance of the laws and how they apply in a university setting may lead to export control violations, which can have severe consequences for the individual researcher as well as Brown University.**

In this course you will learn about:

- The main export control regulatory schemes
- The types of activities at a university that may implicate export controls
- Exceptions and exclusions to export control regulations
- Your responsibilities under Brown University's export control compliance program
- Potential "Red Flags" when it comes to export controls
- Who to contact with questions or for additional training

EXPORT CONTROL REGULATIONS

Export controls and international sanctions involve a number of different regulations. The three major regulatory schemes are the **ITAR**, the **EAR**, and **OFAC**. It is important to remember these acronyms as they may appear in written agreements, on invoices, or be casually referenced by a Program Officer.

International Traffic in Arms Regulations (ITAR)
Overseen by the Department of State

Governs military, weapons and space-related technologies

Export Administration Regulations (EAR)
Overseen by the Department of Commerce

Governs “dual-use” items (those with both military and commercial applications or strictly commercial applications)

Office of Foreign Assets Control (OFAC)
Overseen by the Department of the Treasury

Governs transactions with countries subject to embargoes, boycotts, or trade sanctions

ITAR

The **International Traffic in Arms Regulations** (ITAR) regulate export, re-export, transfer and licensing of *Single-Use Defense Articles* (i.e., items with primary military and/or space applications)



➤ **Items controlled under the ITAR are enumerated on the U.S. Munitions List (USML)**

- The USML is divided into 21 categories of defense articles, ranging from firearms and nuclear weapons to advanced infrared cameras and drones
- Examples include missiles, military armor, certain chemical agents, naval technology, satellite/spacecraft technology, ammunition, and explosives
- For more information, see [22 C.F.R. Chapter I, Subchapter M Parts 120-130](#)

ITAR - IMPORTANT

Most people do not commonly associate universities with military/defense technology. However, universities increasingly engage in activities that may encroach on ITAR territory.

- Universities are increasingly participating in research funded by military sponsors (e.g., Department of Defense, Office of Naval Research, Air Force Office of Scientific Research)
- Universities and their faculty increasingly collaborate with military research organizations and agencies (e.g., Naval Undersea Warfare Center, Raytheon, Lockheed Martin)
- Many research areas, such as biology, chemistry, physics, engineering, and applied math have an increased military focus.
- More academic researchers are using advanced or military technology in their research, some of which may be controlled under the ITAR.

IMPORTANT: Faculty and staff must pay special attention to the ITAR, particularly if conducting research funded by military sponsors.

EAR



The **Export Administration Regulations (EAR)** regulate exports, re-exports, transfers, and licensing of *Dual-Use Commodities* (i.e., items with civil and military applications)

➤ **Items controlled under the EAR are enumerated on the Commerce Control List (CCL)**

- Items listed on the CCL have **Export Control Classification Numbers (ECCNs)**. ECCNs are five character alpha-numeric designations that categorize items based on the nature of the product and its respective technical parameters (e.g., 9A012, 3A001)
- Examples include laptops, smart phones, drones, navigation systems, infrared cameras, lasers, and biological agents
- For more information, see [15 C.F.R §§ 730-774](#)

EAR - IMPORTANT

- Nearly every item, material, or software (collectively, “products”) in the U.S. is subject to U.S. export controls. Products manufactured and bought abroad become subject to U.S. export controls the moment they enter U.S. territory.
- Items are either subject to the ITAR - and thus listed on the [United States Munitions List](#) (USML) - or are subject to the EAR - and thus listed on the [Commerce Control List](#) (CCL) or designated as “EAR99”.

What is “EAR99”?

Items subject to the EAR but not listed on the CCL are designated in a “catch all” category called “EAR99.” EAR99 items typically do not require a license to be exported and may be shipped under the designation “No License Required (NLR).” However, a license is almost always required when exporting an EAR99 item to a sanctioned/embargoed country, to a prohibited end-user, or in support of a prohibited end-use.

OFAC

The Office of Foreign Assets Control (OFAC) regulates licensing of transactions involving *sanctions and embargos*.

Comprehensive and Selective Sanctions may apply to:

- Countries
- Companies
- Individuals

- Current list of comprehensively embargoed countries/territories:
North Korea, Iran, Cuba, Syria, Sudan, Crimea Region (Ukraine/Russia)
- For more information, see [OFAC sanctions programs](#)



OFAC - IMPORTANT

Embargoed Countries: While it may be relatively easy to book an airline ticket to Cuba, Sudan or even Iran, there are still many restrictions and prohibitions regarding what you can do and bring into these countries, and with whom you can interact while there.

IMPORTANT: If traveling to any embargoed destination, contact the Export Control Compliance team to determine whether licenses are needed to

- (a) carry research items or materials;
- (b) conduct research or business in that country.

OFAC - IMPORTANT

Restricted Parties: OFAC and other government agencies maintain extensive sanctions/“restricted party” lists that include organizations, companies and individuals (collectively, “parties”) from all around the world, including the U.S.. These lists are updated periodically.

Transactions with listed parties are prohibited unless authorized by a license.

IMPORTANT: It is not always obvious whether an organization, company, or individual is a “restricted party.” For example, some well known universities are considered “restricted parties,” including Ben Gurion University (Israel), Sichuan University, and Beijing University of Aeronautics and Astronautics (both in China).

- *Brown’s Export Control Officer has special software to screen for restricted parties. Contact the Export Control Officer prior to engaging with an international collaborator.*

OFAC - IMPORTANT

In addition to the comprehensively embargoed countries/region, OFAC also maintains **targeted and list-based sanctions programs** against a number of other countries and regions.

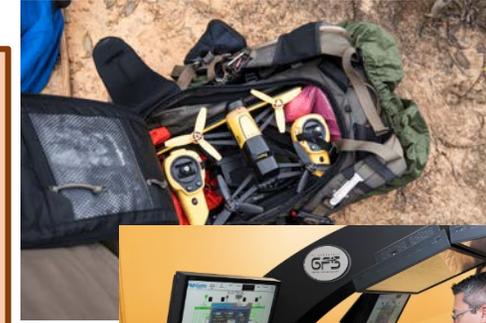
- Targeted or list-based sanctions typically target specific groups (e.g., government or former regimes) or specific sectors (e.g., oil industry, nuclear energy sector)

IMPORTANT: If traveling or engaging in research or collaborative activities involving any of the countries listed below, contact the Export Control Compliance team for guidance.

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

WHEN AM I EXPORTING?

- Export Control regulations define the term “*export*” broadly.
- *Exporting* includes shipping materials abroad or sending an email with controlled technical information to a colleague in another country. It also includes the release of information or technology to a foreign national here in the U.S.
- Many everyday activities at a university may, in fact, involve “exporting.”



Export Examples:

- Shipment of research materials to colleagues abroad.
- Hand-carrying a controlled research drone or GPS system to a research site abroad.
- Traveling to a conference abroad with your laptop on which you have downloaded export controlled software or controlled technical data.
- Sharing controlled technical data via email with a German colleague in Munich.
- Conducting research in an embargoed or sanctioned country.



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WHAT IS A “DEEMED EXPORT”?



Releasing or transmitting controlled technology or information to a [foreign person](#) within the U.S (e.g., a foreign national graduate student at Brown), is referred to as a “Deemed Export.”

- Deemed Exports are regulated by the same export control regulations as the actual transfer of items out of the U.S.
- Deemed Exports are considered an export to the foreign person’s home country.

“Deemed Export” Examples:

- Discussing controlled technical data with a foreign national research scholar at Brown
- Allowing a foreign graduate student access to ITAR controlled technology

Note: For Deemed Exports, the ITAR regulations consider **all** citizenships and permanent residencies held by a foreign person. For example, the transfer of technical data to a Chinese national who also holds a U.K. passport and a Canadian residency permit, is considered a deemed export to China, the U.K., and Canada. However, once a person is a U.S. permanent resident or a naturalized U.S. citizen, the ITAR does **not** consider prior or dual citizenships or permanent residencies.

EXEMPTIONS AND EXCLUSIONS

➤ As a U.S. institute of higher education, Brown can take advantage of a number of exemptions and exclusions from export control regulations, such as the **Fundamental Research Exclusion (FRE)**, the **Education Exclusion**, and the **Public Information Exclusion**. As a result, many activities we engage in on Brown's campus are excluded from export controls.

IMPORTANT: Export control regulations dictate specific conditions under which these exemptions and exclusions apply. If the conditions set forth under the regulations are not met, the exclusions and exemptions do not apply and the activity becomes subject to export controls.



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FUNDAMENTAL RESEARCH EXCLUSION (FRE)

What is the FRE?

In 1985, the U.S. government, recognizing that the strength of academic research relies on creating an environment that promotes creativity and the free exchange of ideas, released the [National Security Decision Directive 189 \(NSDD189\)](#), which included an exclusion for “Fundamental Research.”



IMPORTANT: “*Fundamental Research*” is a defined term. It means “basic and applied research in science, engineering, and mathematics, where the resulting information is ***ordinarily published*** and ***shared broadly*** within the scientific community.”

Both the EAR ([15 CFR 734.8](#)) and the ITAR ([22 CFR 120.11](#)) contain provisions that shield fundamental research from the respective regulations. OFAC regulations also attempt to “carve-out” certain educational activities/exchanges, but such carve-outs are limited and, unlike the EAR and ITAR, there is no “fundamental research” exclusion.



FUNDAMENTAL RESEARCH EXCLUSION

➤ Under the FRE, information and/or “software” that arise during, or result from, “fundamental research” are not subject to export controls.

IMPORTANT! Even under the FRE, some items and information are subject to export controls, and may require an export license. These are:

- Controlled items or information used in the research, such as purchased items, software from national labs, or controlled or proprietary data provided by a sponsor or a third party;
- Tangible items resulting from the research (prototypes, etc.).



Example:

Dr. Jones, Associate Professor in Engineering, has received an NSF award to conduct fundamental research. The research agreement contains no access restrictions, and he is free to publish and share his research results broadly. Thus, the project qualifies for the FRE and the research and its results are not subject to export controls. However, Dr. Jones wants to use a thermal imaging infrared camera in his research. The camera he has purchased is listed on the Commerce Control List (CCL) and is controlled under the EAR (ECCN 6A003.b.4.b.)

Even though the camera will be used to conduct fundamental research, the camera itself will be subject to export controls. Specifically, it means that the camera may not be taken abroad without prior approval from the Export Control Officer and, if necessary, an export license from the Department of Commerce.

FUNDAMENTAL RESEARCH EXCLUSION

IMPORTANT: the FRE can be jeopardized if:

- the University or a researcher accepts any restrictions on publication of scientific and technical information resulting from the project or activity, including publication pre-approval requirements
- a research agreement/award restricts access or participation of foreign nationals, or
- the researcher agrees (even verbally) to any “side-deals” outside of the negotiated terms and conditions of an award or agreement, including:
 - Signing a Non-Disclosure Agreement (NDA) with parties participating in research
 - Accepting proprietary or controlled data from a third party

Brown generally does not accept restrictions that might jeopardize the FRE. Delays in finalizing sponsored research agreements can be encountered when sponsors try to insert publication or access restrictions in agreements.

EDUCATIONAL INFORMATION EXCLUSION

➤ The **Educational Information Exclusion** covers information that is **commonly taught in universities via instruction in catalog courses** and/or through the associated teaching laboratories.



➤ Knowledge and information that is taught as part of a course or as part of laboratory training and thus qualifies as “educational information” is **not** subject to Export Controls.

➤ No export license is required to share such information with foreign nationals in the U.S. or abroad.

PUBLIC INFORMATION EXCLUSION

- The **Public Information Exclusion** covers any information that is already “[publicly available](#)” or in the “[public domain](#).”

Examples include:

- Books, newspapers and pamphlets;
- Publicly available technology and software;
- Information presented at conferences;
- Information included in published U.S. patents;
- Websites freely accessible to the public.

- **Publicly available information** is not subject to Export Controls and no export license is required to share such information with foreign nationals in the U.S. or abroad.

EXPORT CONTROLS AT BROWN

- At Brown, compliance with Export Controls is overseen and coordinated by the Export Control Compliance team in the Office of Research Integrity (ORI).
- Brown has an [Export Control Policy](#) that outlines how the university and its faculty, staff, and students comply with all applicable export control regulations.
- Brown also has an [Export Control Compliance Manual](#) which defines compliance roles and responsibilities within the Brown community, and describes internal compliance procedures.

[Contact](#) us with any questions or visit our [website](#) for further information and resources, a list of FAQs, and links to all major regulations.

BEHIND THE SCENES...

Much of Brown's Export Control compliance program is conducted "behind the scenes."

Offices such as the Office of Sponsored Programs, Purchasing, and the Technology Ventures Office conduct thorough reviews of all incoming contracts and agreements to ensure compliance with Export Control regulations, Brown policy and procedures.

Examples:

- An incoming sponsored agreement is reviewed for potential publication, dissemination or foreign national access restrictions;
- The Office of Purchasing & Insurance forwards Purchase Orders for special research items/materials to the Export Control Officer for review and classification;
- Restricted party screening is performed on all outgoing material transfer agreements.

PROHIBITED ACTIVITIES

➤ Classified Research/Restricted Unclassified Research

- Currently, Brown does not allow classified or restricted unclassified research. Further, Brown does not accept classified data.

➤ ITAR-controlled technology

- Brown's export control compliance program is designed to limit Brown's exposure to ITAR-controlled products, technology, and technical data by **presumptively prohibiting faculty, students, and staff from purchasing any item on the United States Munitions List (USML) and subject to the ITAR.**
- Faculty, students, and staff are **prohibited from purchasing any ITAR-controlled products or technology with a University Purchasing Card**, regardless of its value.
- Faculty, students, staff **must** contact Brown's Export Control compliance team if they see any **reference to "ITAR" or "USML" in any sales agreements, quotes, or other purchasing documents.**

IMPORTANT! Faculty, students or staff who wish to have ITAR controlled technology on campus must:

- **receive explicit and written approval from the Vice President for Research; and**
- **work with the Export Control Officer to implement a Technology Control Plan (TCP) prior to the arrival of the controlled item.**

Your compliance responsibilities

You must contact the Export Control Office if...

- You plan to travel to a sanctioned/embargoed country, even if the sanctions are limited and sector-specific.
- You intend to purchase or receive items or materials that are listed on the USML and are controlled under the ITAR.
- You receive a request (written or verbal) or agreement/contract that supports a restrictive trade practice or boycott imposed by another country. You must report the request to the ECO, who, in turn, is obligated by law to review and, when required, report it to the Department of Commerce.
- You receive a collaboration or non-disclosure agreement from a third party research collaborator that contains reference to “export controls” or “controlled technology or data.”

Additional responsibilities

- If you travel outside the U.S. with technology or encrypted devices, **you must** ensure that the technology or encrypted device does not require an export license.
- If you wish to ship research materials or technology abroad, **you must** ensure that the materials and technology do not require export licenses.
- Do not circumvent Brown's internal procedures, including those for shipping materials or hosting international researchers, as they are used as compliance review triggers, including export control screening.
- If you are hosting visiting scholars, scientists, students or trainees from comprehensively embargoed countries, you are strongly advised to contact the Export Control Officer to assist in evaluating potential deemed export risks.

Contact the Export Control Compliance team with questions or for guidance: Jules Blyth (401-863-3295) or Rebecca Haworth (401-863-2041)

How do I know whether a technology requires a license for export?

➤ Nearly every item in the U.S. has an **export control classification**. The classification determines the level and type of export restrictions. Knowing an item's export control classification is the first step in ascertaining whether it requires an export license to a particular destination.

ITAR: Items subject to the ITAR are listed on the United States Munitions List (USML) and have Roman numeral export classifications, going from [Category I to Category XXI](#). *ITAR items are highly restricted and will generally require an export license to almost all countries.*

EAR: Items subject to the EAR are listed on the Commerce Control List (CCL). Items will generally have a [5-digit alphanumeric export control classification number \(ECCN\)](#), such as 3C005 or 6A003, based on the nature of the product and its respective technical parameters. *EAR items may require an export license depending on a variety of factors such as destination, length of stay, and proposed end-use.*

EAR99: Most daily-use products that are purchased or received at Brown are likely classified as "EAR99". *EAR99 items typically do not require an export license unless they are being exported to an embargoed country.*

Export Control Classification

IMPORTANT!

Do not assume that just because a product is cheap or can easily be purchased online, it is “EAR99,” and has, therefore, no export restrictions. Many [commercially available products](#) we use at the university, including laptops, cell phones, smart phones, GPS systems, telescopes, and drones are listed on the CCL and have Export Control Classification Numbers (ECCNs) that may have some export restrictions. Also, some commercial off-the-shelf products, such as thermal imaging cameras, precision gyroscopes, and focal plane arrays, are highly controlled.

How to obtain an item’s Export Control Classification

- Ask the vendor or manufacturer to provide you with the item’s/material’s Export Control Classification Number (ECCN)
- You can also ask Brown’s Export Control Officer for help

Export Control Red Flags



Below is a list of Export Control Red Flags. If encountering any of these, we strongly advise that you contact the Export Control Officer for assistance and guidance on potential export control issues.

- ❖ Transfer/shipments of equipment, materials, or funding to a foreign country;
- ❖ Exporting items or material that could be used in/for a weapon of mass destruction (nuclear, chemical, biological, missiles);
- ❖ Restrictions – written or verbal - on publication rights;
- ❖ Restrictions – written or verbal - on foreign participation;
- ❖ Sharing/Shipping Encryption Source Code Abroad;

- ❖ Submitting a research proposal that is geared primarily toward developing military technology;
- ❖ Reference to “export controls” or “export controlled technologies or data” in an award/grant document, including a funding announcement.
- ❖ Developing or modifying an item, information or software for a military use or for use in outer space;



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WHEN EXPORT CONTROLS ARE TRIGGERED

- Brown's Export Control compliance team will review license requirements and facilitate the license application process

Who issues a license?

- Department of Commerce issues export licenses for items controlled under the EAR
 - Licensing following submission of an application by Brown usually take 1-3 months
- Department of State issues export licenses for items controlled under the ITAR
 - Licensing following submission of an application by Brown usually take 1-3 months
- Department of the Treasury/OFAC issues licenses related to sanctioned and embargoed countries
 - Licensing following an extensive, narrative application by Brown can take several months

What is an export license?

- An Export License is a **written** authorization provided by the federal government granting permission for the release or transfer of export controlled information or an item under a defined set of conditions.
- If an export license is required, the export (i.e. shipping or taking abroad, sharing with a foreign national) **cannot** take place without an issued license.
- A license is not transferrable and cannot be used for anything else beyond what was requested. For example, if a license is issued to take a drone to Syria, the issued license can not be used to take the same drone to Egypt.

NONCOMPLIANCE WITH THE REGULATIONS

Export controls are federal laws and regulations. Noncompliance can result in severe criminal and monetary fines to **both** the individual and the University.

- Fines of up to \$1,094,010 per violation
- Prison sentences of up to 20 years per violation

Non-compliance can also lead to:

- Protracted and intensive investigations involving federal agencies;
- Termination of export privileges;
- Loss of federal funding; and
- Significant harm to the integrity and reputation of the individual and Brown University



QUESTIONS?

The Export Control Compliance team is here to assist the Brown community with questions and issues related to export controls, such as:

- individual or group trainings, Brown Bags, and other information sessions.
- license and other regulatory analyses, technology classifications, and facilitation of the license application process.
- classification documentation for overseas travel and end-user certifications.
- communication with vendors regarding export control classification numbers.
- restricted party screening.

- Visit our [website](#) for further information and resources, a list of FAQs, and links to all major regulations.

Contact Brown's Export Control Compliance team

- [Jules Blyth](#), Associate Director, ORI/Export Control Officer
- [Rebecca Haworth](#), Research Integrity Manager
- [Keri Godin](#), Director, ORI