U.S. EXPORT CONTROLS
IMPACT ON RESEARCH AND RELATED
UNIVERSITY OPERATIONS
Our Goals Today

• Raise awareness regarding export controls
  • Laws are extensive, complicated and subject to numerous modifications
  • As applied to institutions of higher education, subject to increased monitoring and enforcement

• Ask for your assistance and input in
  • Assessing the impact of these laws for your area
  • Determining steps University must continue to take to ensure compliance with export controls throughout the institution

• Provide information on a software tool, Visual Compliance, that can assist with export controls compliance for your area
What are “export controls”?

- Federal laws and regulations governing:
  - the export of certain information and technology
  - to foreign entities and foreign nationals
    - Abroad
    - In the U.S.
Purpose of Export Controls

Regulate distribution of strategically important technology and information to foreign nationals and foreign countries and entities for reasons of:

- foreign policy
- national security
- prevention of terrorism
Enforcement of Regulations

- President announces that all federal agency regulations are to cease in order to review and eliminate as many as possible.

- U.S. Administration Exempts DDTC from Limit on New Regulations.

- Mr. Brian Nilsson, Deputy Assistant Secretary of State for Defense Trade Controls, stated at the public meeting of the Defense Trade Advisory Group (DTAG) on March 30, 2017 in Washington, DC, that DDTC is exempt from the Administration's limit on new regulations, so plans are continuing to issue new or revised regulations this year for the following subjects:
  - Defense services
  - Public domain
  - Technical data
  - Fundamental research
  - ITAR 126.4 exemption
  - US persons abroad - registration and licensing requirements
What areas of the University are affected?

NOT limited to sponsored research
Areas/Activities impacted include:

- Admissions
- Human resources
- Individual faculty and staff
- International faculty, students, staff & visitors
- Shipping
- International Studies
- IP management

- Property control
- Purchasing
- Sponsored research
- Travel
- Environmental Health & Safety
Export Control Regulations


- “OFAC” - Office of Foreign Assets Control of the U.S. Department of Treasury. 31 C.F.R. §§ 500-599
EAR- Export Administration Regulations

Applies to “dual use” items

Items designed for commercial (civilian) purposes that can have military applications

Examples:
- Computers and software
- Lasers
- Pathogens

Commerce Control List (CCL)
- 15 C.F.R. Part 738
ITAR - International Traffic in Arms Regulations

- Regulations implement the Arms Export Control Act, 22 U.S.C. § 2778 et seq.
- Apply to items (and related technical data) that are military in character (designed to kill or defend against death in a military setting)
- Include space related technology and missile technology
- United States Munitions List (USML), 22 C.F.R. Part 121
OFAC - Office of Foreign Assets Control

- Imposes economic sanctions and embargoes for specified
  - Countries
  - Entities
  - Persons
- Prohibits
  - Payments or providing anything of value to sanctioned countries, and specified nationals and entities
    - University may not enter into contract with embargoed entities/persons
  - Travel to and other activities with embargoed countries and individuals/entities
OFAC Countries of Concern

- State sponsors of terrorism listed by the U.S. Department of State
  - Iran, Sudan and Syria

- Additional countries listed by the U.S. Department of State as having embargoes include, but are not limited to:
  - Afghanistan
  - Belarus
  - Burma (Myanmar)
  - Cote D’Ivoire (Ivory Coast)
  - Cuba ***
  - Democratic Republic of the Congo
  - Korea, Democratic People’s Republic of [North Korea]
  - Liberia
  - Libya
  - Venezuela
  - Zimbabwe
U.S. License Required for Export of Controlled Technology/Information

- U.S. Government license required before transfer of controlled technologies or information
  - Tangible technology - prototypes or software
  - Research results/information

- U.S. Government license
  - ITAR - D-Trade
  - EAR - SNAP-R
  - OFAC - Department of Treasury
CCL (EAR) Categories

0 - Nuclear Materials, Facilities and Equipment
1 - Materials, Chemicals, Microorganisms and toxins
2 - Materials Processing i.e., making plastics, metals
3 - Electronics Design, Development and Production
4 - Computers
5 - Telecommunications and Information Security
6 - Sensors and Lasers
7 - Navigation and avionics
8 - Marine
9 - Propulsion Systems and Space Vehicles
CCL Groups and ECCN

- Each Category contains the same 5 Groups
  - A - Equipment, Assemblies and Components
  - B - Test, Inspection and Production Equipment
  - C - Materials
  - D - Software
  - E - Technology

- Within each Group, individual items are identified by an Export Control Classification

- Number (ECCN)

- Each ECCN has numbers and a letter
  - First number is the general Category
  - The letter identifies the Group
  - The next number identifies the reason for the control of the item
CCL Groups and ECCN

How Are Export Controls Regulated? (Continued)

FISCHER & ASSOCIATES

Example of ECCN

9A012 Non-military "Unmanned Aerial Vehicles," ("UAVs"), unmanned "airships," related equipment and "components," as follows (see List of Items Controlled).

Reason for Control: NS, MT, AT

LIST BASED LICENSE EXCEPTIONS (SEE PART 740 FOR A DESCRIPTION OF ALL LICENSE EXCEPTIONS)

LPS: N/A

GBS: N/A

CFP: N/A

LIST OF ITEMS CONTROLLED

Related Controls: See the U.S. Munitions List Category VIII (22 CFR Part 121). Also see section 744.3 of the EAR.

Related Definitions: N/A

Item:

a. "UAVs" or unmanned "airships," designed to have controlled flight out of the direct "natural vision" of the "operator" and having any of the following:

1. A maximum "endurance" greater than or equal to 30 minutes but less than 1 hour; and
2. Designed to take-off and have stable controlled flight in wind gusts equal to or exceeding 46.3 km/h (25 knots); or
3. A maximum "endurance" of 1 hour or greater;

Technical Notes:

1. For the purposes of 9A012.a, "operator" is a person who initiates or commands the "UAV" or unmanned "airship" flight.
2. For the purposes of 9A012.a, "endurance" is to be calculated for ISA conditions (ISO 2533-1975) at sea level in zero wind.
3. For the purposes of 9A012.a, "natural vision" means unaided human sight, with or without corrective lenses.

b. Related equipment and "components," as follows:

1. Reserved
2. Reserved
3. Equipment or "components," "specially designed" to convert a manned "aircraft" or a manned "airship" to a "UAV" or unmanned "airship," controlled by 9A012.a;
4. Air breathing reciprocating or rotary internal combustion type engines, "specially designed" or modified to propel "UAVs" or unmanned "airships," at altitudes above 15,240 meters (50,000 feet).

Note: 9A012 does not control model aircraft or model "airships".
How Are Export Controls Regulated? (Continued)

EAR-Commerce Department “Dual use” controls (15 CFR 700-799):

- Example of ECCN 6A002b. Optical sensors and equipment, and “components” therefor, as follows (see List of Items Controlled).
  - Reason for Control (entire entry): NS, MT, CC, RS, AT, UN
  - Reason for Control (6A002: 6A only): NS, AT
  b. “Monospectral imaging sensors” and “multispectral imaging sensors”, designed for remote sensing applications and having any of the following:
    - b.1. An instantaneous-Field-Of-View (IFOV) of less than 200 μrad (microradians), or
    - b.2. Specified for operation in the wavelength range exceeding 400 nm but not exceeding 30,000 nm and having all the following:
      - b.2.a. Providing output imaging data in digital format; and
      - b.2.b. Having any of the following characteristics:
        - b.2.b.1. “Space-qualified”; or
        - b.2.b.2. Designed for airborne operation, using other than silicon detectors, and having an IFOV of less than 2.5 μrad (milliradians).
  - NOTE: 6A002 b.1 does not control “monospectral imaging sensors” with a peak response in the wavelength range exceeding 300 nm but not exceeding 900 nm and only incorporating any of the following non-“space-qualified” detectors or non-“space-qualified” focal plane arrays:

- Check Country Chart to determine whether your intended destination is controlled for export of your particular item.
## CCL Groups and ECCN

### Commerce Country Chart

<table>
<thead>
<tr>
<th>Countries</th>
<th>Chemical &amp; Biological Weapons</th>
<th>Nuclear Nonproliferation</th>
<th>National Security</th>
<th>Missile Tech</th>
<th>Regional Stability</th>
<th>Firearms Convention</th>
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**Export Administration Regulations**: Bureau of Industry and Security  
**May 22, 2015**
USML (ITAR) 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 Ware and Special Naval Equipment
USML Categories (Cont’d)

VII--Tanks and Military Vehicles
VIII--Aircraft and Associated
IX--Military Training Equipment and Training
X--Protective Personnel and Equipment and Shelters
XI--Military Electronics
XII--Fire Control, Range Finder, Optical and Guidance and Control Equipment
XIII--Auxiliary Military Equipment
USML Categories (Cont’d)

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
Applies to Exports and “Deemed Exports”

- **Exports**
  - Shipped
  - Hand carried to the foreign country (e.g., laptops)

- **Deemed Exports**
  - transfers of information to “foreign persons” in U.S.
    - Oral exchanges
    - Visual demonstration, view of equipment, technology
    - Written exchanges
Who is a “foreign person” for export control purposes?

- Any natural person who is not a U.S. citizen or lawful permanent resident of the United States (Note that green card holder is not a “foreign person”)

- Any foreign corporation, business association, partnership, trust, society or any other entity or group that is not incorporated or organized to do business in the United States

- Any international organization, foreign government and any agency or subdivision of foreign government (e.g. diplomatic mission)

- Note that “foreign person” includes non-U.S. universities
Fundamental Research Exclusion (FRE)

- Do not need a license to share:
  - “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.”
FRE

• Allows U.S. universities to include foreign faculty, students, visitors in research involving creation of controlled information in the U.S. without a license

• If fundamental research, the information may be transferred in U.S. and abroad without restriction

• No restrictions may be imposed on conduct or reporting of federally-funded fundamental research that has not received national security classification

• Note: certain encryption software does not qualify for FRE
FRE

What is “Use” of Controlled Technology that would require a license even under the FRE?

All the following are required per 15 CFR 772.1:
• Operation
• Installation (including on-site installation)
• Maintenance (checking)
• Repair
• Overhaul AND
• Refurbishing
FRE Nullified By:

Publication Restrictions

Note: brief review period of time (30-90 days) permitted for patent information

Foreign National Restrictions imposed by sponsoring agency Side deals by faculty promising confidentiality Sensitive but unclassified or designation “For Official Use Only” or any higher classification
Public Domain/Publicly Available Information

- No license required for information that is already published and generally accessible to the public through, among other things:
  - Libraries, bookstores, newsstands
  - Trade shows, meetings, seminars open to public
  - Websites available freely to the public

- Applies only to information and not to equipment or certain encryption software
Educational Information Exemption

- No license required for instruction in science, math, and engineering taught in courses listed in catalogs and associated teaching laboratories of academic institutions, even if the information concerns controlled commodities or items

- Does not apply to certain encryption software
Full-Time Employee Exemption

- No license required for release of information to:
  - full-time
  - regular
  - bona fide employees of FIU
  - who maintain U.S. residency during employment
  - who are informed in writing not to transfer to other foreign nationals
- Post-Docs may not meet above criteria
- Does not apply to foreign nationals from OFAC prohibited countries
What is export control review process?

- Determine if technology/information sought to be transferred - either as a deemed export or export is on the CCL or USML and requires license to country to which export is sought
- Determine if the fundamental research exclusion or another exemption applies, if export is deemed export
- Determine if entity/person/country with which/whom export is to be shared is on OFAC lists
DO I NEED TO BE CONCERNED ABOUT EXPORT CONTROLS IN THIS RESEARCH? (Source - Julie T. Norris, MIT)

1. Public domain, and
   a) No equipment, encrypted software, listed-controlled chemicals, bio-agents or toxins, or other restricted technologies are involved, and
   b) Information/software is already published, and
   c) There is no contractual restriction on export, or
2. Fundamental Research
   (note definitions and caveats associated with this exemption)

   NO

   1. Equipment or encrypted software is involved, or
   2. Technology is not in the public domain, and
   3. Technology may be exposed to foreign nations (even on campus) or foreign travel is involved, and
      a) The equipment, software or technology is on the Commerce Control List, or
      b) Information or instruction is provided about software, technology, or equipment on the CCL, or
      c) The foreign nationals are from or the travel is to an embargoed country
   4. The contract has terms e.g. a publication restriction that affect the Fundamental Research Exclusion

   Probably
   (further review is required)
   License May Be Required

   1. Equipment, software, chemical, bio-agent, or technology is on the US Munitions List (ITAR), or
   2. Equipment, software, chemical, bio-agent or technology is designed or modified for military use, use in outer space, or there is reason to know it will be used for or in weapons of mass destruction, or
   3. Chemicals, bio-agents or toxins on the Commerce Control List are involved, or
   4. The contract contains a restriction on export or access by foreign nationals

   YES
   License Will Be Required
If License is Required or Award Limits Sharing of Information, a Technology Control Plan is Needed

Plan must be put into place to safeguard controlled technology from use and observation by unlicensed non-U.S. citizens.

Plan is specific to each project and includes items such as:

- **Physical Security** - restrict physical access to labs and controlled information/technology to authorized personnel - badging, key control access, visitor logs

- **Information Security** - clean desk policy, data discard/return, have export controlled information/technology identified and marked, store export controlled information in locked cabinets preferably in rooms with key-controlled access
Some Examples of How Export Controls Can Affect Your Areas
Export Control Considerations
Purchasing - Vendor Payments

- May not provide payment or anything of value to persons/entities on any of the denied lists
  - Includes purchase of equipment, etc.
  - Includes payment to entities and persons in the U.S.
  - Check vendors against lists of denied persons/entities
Export Control Considerations

Property Control

- Use of controlled equipment by foreign national, even on campus, may require license even if FRE applies
- FRE applies to information only, not tangible equipment
Export Control Considerations
Travel

• Taking equipment (such as GPS) and laptops to foreign country may require a license if equipment or software in laptop is controlled technology

• Exceptions may allow for export without a license

• Travelers to a foreign country must be aware of denied persons/entities lists related to that country

• Travelers to a foreign country must be aware of any travel embargoes to that country
Temporary Export Exception under EAR for Laptops

Faculty may take their laptops to a foreign country to use in a project that qualifies as fundamental research without a license if:

- laptop is a “tool of trade” (usual and reasonable kinds and quantities of commodities and software for use in a lawful enterprise or undertaking of the exporter)
- laptop will be out of the country no more than one year from date of export
- laptop remains under the control of the traveler
- Eligible tools of trade may include equipment and software provided that the equipment or software is appropriate for this purpose and that all goods to be commissioned or serviced are of foreign origin, or if subject to the EAR, have been legally exported or re-exported.

- Other possible exception - “Baggage” under EAR, 15 C.F.R. § 740.14
Export Control Considerations
Software

- Software that is publicly available most likely will not require license, but proprietary software or software of controlled technology may require license.

- Encryption technology could require license or could be prohibited for use by certain foreign nationals.
Export Control Considerations

Shipping

License is needed to ship controlled equipment per ITAR to any foreign country.

License may be needed to ship controlled equipment per the EAR to foreign country depending on equipment, use and foreign country.

Shipping of controlled equipment outside the country seldom qualifies for exclusion.

Must obtain license before shipping controlled technology/knowledge outside of U.S.
Consequences for Non-Compliance are Severe and Include:

- Fines and civil penalties
  - EAR and ITAR - up to $1M per violation
  - OFAC - $50k-$10M per violation

- Imprisonment
  - EAR and ITAR - up to 10 years
  - OFAC - up to 30 years

- Loss of exporting privileges and/or federal funding

- Damage to reputation
Examples of Recent Enforcement Action
• Bass-Pro - $510K administrative penalty for exporting gun sights without a license

• ITT - fined $100 M for exporting night vision materials without license

• Dr. Thomas Butler, Texas Tech - convicted to 2 years in prison for making fraudulent and fictitious statements to federal agents and unauthorized exports (plague bacteria)
OFAC

- Barclays Bank - $2.48 million
- Red Bull Energy Drink - Cuba - $90,000
- An Individual and the Alliance for Responsible Cuba Policy Foundation - $10,000
ITAR

Civil penalties/fines include:

- Hughes Electronics and Boeing Satellite Systems - $32 M
- Boeing - $4.2 M
- Lockheed Martin - $13 M
Recent criminal prosecution:

- John Reece Roth, Professor of Electrical Engineering, University of Tennessee
- Convicted on 9/3/08; sentencing set for 1/09
- Conviction based on violation of the Arms Export Control Act by illegally exporting “defense articles” to citizen of the People’s Republic of China
Software Tool Demonstration
Visual Compliance Software

- Tool assists in determination of:
  - Technologies that require license for export
  - Countries, entities, persons denied access to technologies
  - Checks against federal lists - CCL, USML, OFAC lists
WELCOME "REGNIER JURADO"
[STATE UNIVERSITY SYSTEM OF FLORIDA]
Visual Compliance Screening

https://www.visualcompliance.com/

- University of Electronics Science and Technology of China (UESTC) - OFAC/Restricted Party
- Drone - EAR/CCL-ECCN
- Thermal Imaging Scope - ITAR/USML

http://www.opticsplanet.com/export.html
Convercent Hotline

• Florida International University has contracted with Convercent to provide a confidential Internet and telephone based reporting tool to give University faculty, staff and students an anonymous and confidential way to address misconduct in the workplace or classroom setting due to mismanagement of funds, fraud, abuse or other violations of law or University policy.

• [http://www.convercent.com/report](http://www.convercent.com/report) or by calling 844-312-5358 to (24 hours a day, 365 days a year)

• CONVERCENT

• Ethical Panther Line
FIU Export Control Resources

• Office of University Compliance & Integrity Export Controls Webpage: https://compliance.fiu.edu/export_intro.html

• Office of Research & Economic Development webpage (Citi Training): http://research.fiu.edu/export-controls/export-training/

• FIU Export Controls Policy - 2370.010 available at: https://policies.fiu.edu/policy/130