UMass Medical School Worcester

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How Many of You Do This?

- International travel or collaboration
- Send information or items to foreign countries
- Work with any sensitive or export-controlled technologies
- Conduct work under service agreements
- Hire foreign students or visiting faculty
- Use foreign sponsors or vendors
- Conduct work that has personnel or publication restrictions
If YES, Then….

- EXPORT CONTROL COMPLIANCE applies to you!
- It is your responsibility to know whether your activities are considered ‘export controlled’
- UMass Office of Research can assist you in making determinations, applying for a license, and evaluating whether any exemptions or exceptions apply
What is an Export?

- Any transfer to any person or entity of goods, technology, or software by physical, electronic, oral or visual means with the knowledge that the item(s) will be shipped, transferred, or transmitted to a non-U.S. entity or individual.
  - This includes emails of proprietary information.

- Any disclosure of technical data or information to a foreign entity or individual, by any means, inside or outside the U.S.
  - Includes interactions with a foreign person visiting or on assignment.
  - Includes interactions while you are on foreign travel.

- Any transfer of goods, technology, or software, by any means, to a foreign embassy or affiliate.
What is a Foreign Person/Entity?

- Any non-US Citizen who is not a lawful permanent resident (Green Card holder).
- Any foreign corporation, business, trust or other entity not incorporated in the US.
- International organizations, foreign governments, and agencies or subdivisions of foreign governments.
Oversight Agencies

**Commerce Dept - Export Administration Regulations (EAR)**
- Regulates items designed for commercial purpose but which can have military applications, (e.g. computers, pathogens, civilian aircraft)
- Covers both the goods and the technology

**State Dept - International Traffic in Arms Regulations (ITAR)**
- Covers military items
- Includes most space-related technology (application to missile tech)
- Includes technical data related to defense articles and defense services

**Nuclear Regulatory Commission**
- Nuclear materials and technology (some is also under EAR 0)

**Treasury - Office of Foreign Assets Control (OFAC)**
- Trade sanctions, embargoes, restrictions on certain end-users, terrorism, anti-narcotics
For Full Listing of Part 774, go to: http://www.gpo.gov/bis/ear/ear_data.html

Category 0 - Nuclear Materials, Facilities & Equipment (and Miscellaneous Items)
Category 1 – Materials, Chemicals, Microorganisms, and Toxins
Category 2 – Materials Processing
Category 3 – Electronics
Category 4 – Computers
Category 5 (Part 1) – Telecommunications
Category 5 (Part 2) – Information Security
Category 6 – Sensors and Lasers
Category 7 – Navigation and Avionics
Category 8 – Marine
Category 9 – Propulsion Systems, Space Vehicles and Related Equipment

Supplement No. 2 to Part 774 - General Technology and Software Notes
Supplement No. 3 to Part 774 - Statements of Understanding
U.S. Munitions List Categories

For Full listing, go to http://www.fas.org/spp/starwars/offdocs/itarm1.htm

I-Firearms
II-Artillery Projectors
III-Ammunition
IV-Launch Vehicles, Guided Missiles, Ballistic Missiles, Rockets, Torpedoes, Bombs and Mines
V-Explosives, Propellants, Incendiary Agents, and Their Constituents
VI-Vessels of War and Special Naval Equipment
VII-Tanks and Military Vehicles
VIII-Aircraft, [Spacecraft] and Associated Equipment
IX-Military Training Equipment
X-Protective Personnel Equipment
XI-Military [and Space] Electronics
XII-Fire Control, Range Finder, Optical and Guidance and Control Equipment
XIII-Auxiliary Military Equipment
XIV-Toxicological Agents and Equipment and Radiological Equipment
XV-Spacecraft Systems and Associated Equipment
XVI-Nuclear Weapons Design and Test Equipment
XVII-Classified Articles, Technical Data and Defense Services Not Otherwise Enumerated
XVIII-[Reserved]
XIX-[Reserved]
XX-Submersible Vessels, Oceanographic and Associated Equipment
XXI-Miscellaneous Articles
XXII(b) Lasers
Remember: Publish or Perish

- Use the Fundamental Research Exemption!
  - Publish, share and disseminate
  - No restrictions for foreign nationals
- Some technologies (advanced encryption) ineligible for FRE
- FRE limited under ITAR because of the jurisdiction over goods and technologies designed to kill people
National Security Decision Directive (NSDD) 189, National Policy on the Transfer of Scientific, Technical and Engineering Information issued 9/21/85 established national policy for controlling the flow of this information produced in federally funded fundamental research at colleges, universities and laboratories.

Reaffirmed in letter from Condoleezza Rice, Asst. to the President for Security Affairs on 11/1/01.
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.
The Fundamental Research Exclusion (FRE) can be lost if...

University based research is not considered “fundamental research” if …

- You accept restrictions on the publication of the results of the project
  - Pertains to many industry contracts and testing agreements
  - EAR/ITAR have a carve-out for delay of publication for a pending patent application

- If the PI has made a “side deal”
  - Could take place via a non-disclosure agreement or acceptance of export-controlled information
The FRE can be lost if...

- The agreement requires sponsor approval prior to publication
  - Sponsor “Review” vs “Approval”
  - Okay to review and comment, but not approve
- The government contract involves an ITAR project with access and dissemination of information controls
  - There is a carve-out under the EAR
- There is a transfer of defense services
  - Potential license requirements for work with foreign nationals
What Is a Deemed Export?

- **Transfer of information** *within* U.S. to a foreign person
  - Transfer is ‘deemed’ to apply when a foreign person receives it
  - Transfer may include conversations, faxes, emails, leaving sensitive materials in open area, etc.
  - Transfer may include transfer of information about equipment if that information is not published in an operating manual

  For FAQs on Deemed Exports, go to [http://www.bis.doc.gov/deemedexports/deemedexportsfaqs.html](http://www.bis.doc.gov/deemedexports/deemedexportsfaqs.html)

- **Visa status is important**
  - Permanent resident (green card holder) – Considered U.S. citizen and No License Required (NLR)
  - Non-immigrant visa holders must meet export control requirements (license may be required)
  - New visa regulations (I-129 form) require PIs to attest there will be no disclosure of controlled information or technology to new hires
A potential deemed export must be considered “use” technology.

To qualify as “use” technology, the user must be able to do all of the following:
- Operate
- Install
- Maintain
- Repair
- Overhaul
- Refurbish

If all 6 criteria are met, deemed export licensing is necessary.
Sanctions/Embargoes

- Focus on **end-user or country** (rather than technology)
- Administered by Treasury Department (OFAC)
  - NO transfer/trade/payments to Cuba, Iran, N. Korea, Sudan, Syria
  - Prohibitions/restrictions on transfer/trade/payments on trade to certain other countries (ex. Libya)
  - Additional information: [http://www.treasury.gov/resource-center/sanctions/Programs/Pages/Programs.aspx](http://www.treasury.gov/resource-center/sanctions/Programs/Pages/Programs.aspx)
- Payments/limitations also prohibited to other listed countries and terrorist-supporting entities
- Additional prohibitions under ITAR and EAR
  - EAR restricts exchanges with Israel, Russia, etc. because of proliferation concerns
  - No shipments subject to ITAR may be shipped to Libya
Who Needs to Know...

- Faculty in high-risk disciplines
  - Chemistry, Physics
- Faculty who have restricted research
- All personnel travelling internationally
- Anyone sending ANYTHING out of the U.S.
Role is to help you understand:
- Types of items/information controlled
- How to meet regulatory requirements
- How to deal with a restricted project
- Vet various transactions (ex. international travel)

Assists to put controls in place for restricted projects (Technology Control Plans)

Project with restrictions MUST be approved by the UMMS Office of Research AND a TCP put in place
## Export Control Regulations

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<th>Regulations</th>
<th>Export Administration Regulations (EAR)</th>
<th>International Traffic in Arms Regulations (ITAR)</th>
<th>Sanction Programs</th>
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<tr>
<td>Who regulates?</td>
<td>Department of Commerce Bureau of Industry and Security (BIS)</td>
<td>Department of State</td>
<td>U.S. Treasury Office of Foreign Assets Control (OFAC)</td>
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<tr>
<td>How do they regulate?</td>
<td>Commerce Control List (CCL)</td>
<td>U.S. Munitions List (USML)</td>
<td>Specially Designated Nationals List (SDN) and OFAC Sanctions Programs</td>
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<tr>
<td>What do the regulations cover?</td>
<td>Dual Use Items: items that may have both commercial and military applications</td>
<td>Defense articles and services, some cryptography systems, space technology, classified technologies</td>
<td>Countries and Individuals that are prohibited end users of certain items</td>
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</tbody>
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Example Scenarios

- **Research agreements that restrict personnel or publications**
  - ex. DOD- FRE invalidated, License and/or TCP may be necessary

- **Service agreements to do materials testing**
  - ex. Using controlled materials where we have technical data negates the FRE, requires TCP
  - Developing form to provide to companies up front to facilitate process

- **Physical exports**
  - Ex. ANYTHING out of the U.S.

- **Deemed exports-transfer of controlled information**
  - Ex. Sharing information that is NOT publicly available with a foreign person

- **Letters to sponsor international visitors**
  - Ex. for other than educational purposes or from someone on the entity list

- **Hiring foreign nationals when you have a restricted project**
  - Ex. Must declare on new I-129 form w ISSO

- **International travel with computers or scientific equipment**
  - Ex. Travel to China with equipment and potential problems
Case Study

- A retired University of Tennessee physics professor helped to develop technology that could be used to advance flight controls for unmanned drone aircraft.
  - Research involved plasma physics applied towards exploring theoretical advantages in aeronautical engineering.
  - U.S. Department of Defense subsidized the work.
- He was found guilty of unlawfully transferring "defense articles" to a graduate student, a national of China, in violation of the Arms Export Control Act (AECA).
- Other accusations included:
  - Taking reports and related studies in his laptop to China during a lecture tour in 2006.
  - Having a report e-mailed to him there via a Chinese professor's email account.
  - Taking a laptop, which contained sensitive information, outside the country. (The Prosecution claimed that the laptop itself was an illegal export.)
He was convicted on 17 counts of conspiracy, violating the AECA and wire fraud, and sentenced to 4 years imprisonment.

Remarks from the accused: "My understanding was that it only applied to things that worked, and we had not shown that. We had a lot of work to do."

Remarks from the prosecution: “Today's guilty verdict should serve as a warning to anyone who knowingly discloses restricted U.S. military data to a foreign national.”

You must consider the potential applications of your research, when determining who should have access to that research.
Important Exceptions for Academia

- Technical data excludes any information concerning:
  - General principles of science, mathematics or engineering taught in schools, colleges and universities.
  - Public Domain information.
- Public Domain information is defined as:
  - Information that is published in magazines, journals, etc., or released with approval for distribution by the appropriate US government authority.
  - Information that is obtained through fundamental research in science and engineering at accredited US institutions of higher learning and ordinarily published and shared broadly in the scientific community.
Supplement List Review – Special Controls

- Country Group
- Country Chart
- Denied Party List
- Embargoed Countries
- OFAC Debarred Parties List

(http://www.access.gpo.gov/bis/ear/pdf/740spir.pdf)
Summary Process

- Are you sending ANYTHING out of the U.S.?
  - Contact UMMS Worcester Office of Research

- Is it fundamental research? If yes, no worries!
  - If no, contact UMMS Worcester Office of Research to:
    - Determine jurisdiction and classification
    - Then check Country Group, Reason for Control, Country Chart, Lists (OFAC, BIS, etc.)
    - Evaluate if any exemptions or exceptions apply or whether a license is needed
    - If license is required, UMMS Worcester Office of Research submits
Remember.....

- Contact the Office of Research whenever you have questions
  - Diego Vazquez, 508 856-5600

- Do NOT assume anything

- Violations include fines, prison time, and public disclosure, and more

Don’t let this happen to you!

http://www.bis.doc.gov/