EXPORT CONTROLS AND RESEARCH AT WPI

TRAINING PRESENTATION
EXPORT CONTROL LAWS
WHAT ARE EXPORT CONTROLS?

- U.S. laws and their implementing regulations that govern the distribution to foreign nationals and foreign countries of strategically important technology, services and information for reasons of foreign policy and national security.

- Licenses from the Department of State or Department of Commerce may be required to export
WHAT IS AN EXPORT?

- Any oral, written, electronic or visual disclosure, shipment, transfer or transmission of commodities, technology, information, technical data, assistance or software codes to
  - any person or entity outside the U.S. including a U.S. citizen
  - a non U.S. individual wherever they are ("deemed export")
  - a foreign embassy or affiliate
U.S. AGENCY ENFORCEMENT

- **Department of State**: International Traffic in Arms Regulations (ITAR) – Transfer and export (including deemed exports) of inherently military technologies

- **Department of Commerce**: Export Administration Regulations (EAR) – Transfer and export of “dual use” (commercial or military) equipment, materials and technologies

- **Department of Treasury**: Office of Foreign Assets Control (OFAC) – Prohibits certain transactions with countries subject to boycotts, trade sanctions and embargoes
WHAT IS SUBJECT TO ITAR?

- Transfer and export (including deemed exports) of technologies related to military applications listed on the U.S. Munitions List
  - Electronic equipment, systems, or software designed for military, security, and intelligence applications
WHAT IS SUBJECT TO ITAR?

- Some examples from the U.S. Munitions List are:
  - Firearms
  - Artillery projections
  - Ammunition
  - Explosives, propellants & incendiary agents
  - Military training equipment
  - Protective personal equipment
  - Military electronics
  - Fire control, range finder, optical & guidance and control equipment
  - Auxiliary military equipment
  - Toxicological agents & equip. and radiological equip.
  - Spacecraft systems & equipment
WHAT IS SUBJECT TO EAR?

- Transfer and export (including deemed export) of “dual-use” technologies relating to civilian applications listed on the Commerce Control List (CCL)

  - Some examples include:
    - Global positioning systems
    - Cameras
    - Optics
WHAT IS SUBJECT TO EAR?

- 10 specific categories of the Commerce Control List (CCL):
  
  - Nuclear materials, facilities, equipment research
  - Chemicals and toxins
  - Materials processing, i.e. making plastics, metals
  - Electronics development
  - Computer development and programs
  - Telecommunications
  - Information security (encryption)
  - Sensors and lasers
  - Navigations and avionics
  - Propulsion systems and space vehicles
WHAT IS SUBJECT TO OFAC?

- Target specific nations in controlling significant financial transactions or services
- Examples of prohibited activities in boycotted countries monitored by OFAC:
  - Conducting surveys and interviews
  - Engaging the services of persons to develop new informational materials or support of research activities
  - Providing marketing and business services
WHO/WHAT IS A FOREIGN PERSON?

- Any foreign government

- Any foreign corporation or organization that is not incorporated or organized to do business in the U.S.

- Any individual who is not a U.S. citizen or lawful permanent resident of the U.S. (green card holder)
DEEMED EXPORTS

- The disclosure or transfer of export controlled software, technologies or technical data to a foreign entity or individual inside the US is “deemed” to be an export to the home country of the foreign entity or individual.

- Situations that can involve the release of U.S. technology or software include:
  - Tours of laboratories
  - Foreign national employees involved in certain research, development, and manufacturing activities
  - Foreign students or scholars conducting research
  - Hosting a foreign scientist
EXPORT CONTROL LAWS AND HIGHER EDUCATION
EXCLUSIONS

- A license is not required to disseminate information if one of the three exclusions applies:
  
  - Fundamental Research (ITAR, EAR)
  - Employment (ITAR only)
  - Education (ITAR, EAR)
FUNDAMENTAL RESEARCH

- “Fundamental Research is basic and applied research in science and engineering where the resulting information is ordinarily published and shared broadly within the scientific community.” (EAR Part 734.8) This is 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 applies only to the dissemination of research data and information, not to the transmission of material goods.
FUNDAMENTAL RESEARCH EXCLUSION IS DESTROYED IF:

- The university accepts any contract clause that:
  - forbids the participation of foreign persons
  - gives the sponsor a right to approve publications resulting from the research; or
  - restricts participation in research and/or access to and disclosure of research results.
- “side deals” between a PI and Sponsor destroy the fundamental research exclusion and may also violate university policies.
EMPLOYMENT EXCLUSION

- No license is required to share information subject to export control laws with a foreign person who:
  - is a full-time, bona-fide employee of the university;
  - is not a national of certain countries of concern;
  - has a permanent address in the U.S. while employed at the University; and
  - has been informed in writing not to transfer the information to other foreign nationals.

NOTE: This exclusion does not apply to students, graduate or undergraduate.
EDUCATION EXCLUSION

- No license is required to transfer information to students, including students who are foreign nationals, concerning general scientific, mathematical or engineering principles commonly taught in universities.

- Foreign students using controlled equipment to conduct research should be registered for a research credit class.
COMPLIANCE RISKS FACED BY UNIVERSITIES

- Universities have been largely immune from past export control enforcement. This will likely change.
- Increased scrutiny of all exports, including “deemed” exports and universities in particular, following 9/11.
- U.S. export controls create significant tensions with university policies of non-discrimination based on nationality and a free and open campus.
EXPORT CONTROL RED FLAGS

- Restrictions on publications in contracts
- “Side deals” between PI’s and sponsors
- Providing services, information or materials to/from a boycotted country
- Collaborating with foreign colleagues in foreign countries
EXPORT CONTROL RED FLAGS

- Carrying equipment/samples outside the U.S., including laptops, cell phones and global positioning systems
- Shipping equipment/samples overseas
- Payments to certain countries
- Accepting export controlled information
- Foreign nationals in the U.S.
- Travel outside the U.S.
PENALTIES FOR NONCOMPLIANCE

- **ITAR**
  - Criminal: up to $1M per violation and up to 10 years in prison
  - Civil: seizure and forfeiture of articles, revocation of exporting privileges, fines of up to $500K per violation

- **EAR**
  - Criminal: $50K-$1M or five times value of export, whichever is greater, per violation, up to 10 years in prison
  - Civil: loss of export privileges, fines $10K-$120K per violation

- **OFAC**
  - Criminal: Up to $1M and 10 years in jail
  - Civil:$12,000-$55,000 per instance
CONTACT INFORMATION

For more information about Export Controls, please contact any of the following individuals:

- Michael Curley, Compliance Office, ext. 6919
- Christina DeVries, Office of Sponsored Programs, ext. 6716
- Franc Lemire, Office of Sponsored Programs, ext. 5811

Website: http://www.wpi.edu/Admin/OSP/exportcontrol.html
It is important that WPI and its researchers are familiar and comply with the export control laws and regulations that govern research funding. Identifying proposals subject to export control laws and regulations early in the funding process, aids in efficient and effective contract negotiations.

Please use the tools on the following two slides or at the links below to determine if compliance with export control regulations applies to your proposal.


MAY BE SUBJECT TO EXPORT CONTROL REGULATIONS
Contact: Tina DeVries x6716
Mike Curley x6919

EXPERIMENT CONTROLS COMPLIANCE REVIEW

Is the equipment, software, chemical, bio-agent, or technology on the US Munitions List (ITAR)? (Screen with Visual Compliance)

NO

Is the equipment, software, chemical, bio-agent, or technology designed or modified for military use, use in outer space or is there reason to know it will be for or in weapons of mass destruction? (Screen with Visual Compliance)

YES

NO

Is the equipment, software, chemical, bio-agent or technology on the Commodity Control List (EAR)? (Screen with Visual Compliance)

YES

NO

Does the contract contain a restriction on export or foreign national access?

YES

NO

Is there encrypted software involved?

YES

NO

Is the technology outside of the public domain?

YES

NO

Does the contract or grant restrict publication or the presentation of research results?

YES

NO

Does the contract or grant prohibit results or deliverables from being disclosed to any foreign country or foreign person?

YES

NO

Will technology be exposed to foreign nationals (even on campus) or is foreign travel involved?

YES

NO

Will there be foreign nationals from or travel to an embargoed country?

YES

NO

MOST LIKELY NOT SUBJECT TO EXPORT CONTROL REGULATIONS
## EXPORT CONTROLS COMPLIANCE REVIEW

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<thead>
<tr>
<th>Does this proposal, project, or agreement:</th>
<th>YES</th>
<th>NO</th>
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<tbody>
<tr>
<td>a. Contain language referring to or mandating compliance with export laws or regulations?</td>
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<td>b. Restrict researcher participation (faculty, student, others) based on country of origin or citizenship?</td>
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<td>c. Prohibit the involvement of foreign persons or entities?</td>
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<td>d. Contain restriction on foreign travel?</td>
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<td>e. Require researcher to participate in meetings with U.S. citizens only?</td>
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<td>f. Grant the sponsor the right of prepublication review for matters other than the inclusion of patent and/or proprietary sponsor information?</td>
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<td>g. Provide that any part of the sponsoring, granting, or establishing documents may not be disclosed?</td>
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<td>h. Limit access to confidential data?</td>
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<td>i. Accept proprietary information as part of the project?</td>
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<td>j. Involve materials, equipment or technology that may be regulated by export control laws?</td>
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CASE STUDIES AND ANALYSIS

The following case studies are adapted from the University of Pennsylvania website.

Case Study 1

A Professor of Engineering has developed a website containing technical information related to high-tech communications technologies with possible military applications. The website may only be accessed through a secured connection requiring a password supplied by the Professor. Several researchers in Norway, South Africa and Turkey have access to the website.

Which of the following is a true statement?

A. This is not subject to export control laws since only researchers in Norway, South Africa and Turkey have access and none of these countries is regarded as an embargoed country.

B. This is subject to export control laws since the technical information relates to communication technology with possible military applications. Such technical information is always subject to export controls.

C. This is subject to export controls since it allows access to export controlled information by foreign nationals.

D. This is not subject to export controls since there is no actual “export” involved, as there is no actual transfer of information.
Case Study 1 Analysis

“Export”, as used in the regulations, does not have the common dictionary definition but has an expansive meaning. “Export” generally means: (1) actual shipment of covered goods or information outside the U.S.; (2) the electronic or digital transmission of covered goods or information outside the U.S.; and (3) release or disclosure, including verbal disclosures or visual inspections, of any covered technology, software or technical data to any foreign national, whether in the U.S. or abroad. This is a summary of a complicated definition, set forth at 15 CFR 734.2, that can be found at w3.access.gpo.gov/bis/ear/pdf/734.pdf.

A. Not true since the definition would apply to any foreign national, not just those in an embargoed country.

B. Not true since technical information related to communication technology with possible military applications is not always subject to export controls (for example, if it were in the public domain).

C. True.

D. Not true since the definition of export applicable to export control laws is not just the transfer of an actual “thing” but even just transfer of information.

Access to a website is an export.
Case Study 2

A researcher in the Department of Chemistry is working on organic compounds that have possible applications as toxins. The research is supported by a grant from the NSF. The researcher asks for your recommendations on sending draft manuscripts describing the organic compounds to foreign researchers outside the U.S. for comment. Which are correct or incorrect?

Sending draft manuscripts:

A. Would be subject to export control concerns only because research results are being sent outside of the U.S.

B. Would be subject to export control concerns since it involves research on organic compounds with possible applications as toxins.

C. Would not be subject to export control concerns since, even if it involves research on organic compounds with possible applications as toxins, since the research was supported by NSF, a federal funding agency, the research would automatically be defined as fundamental.

D. Would not be subject to export control concerns since, even if it involves research on organic compounds with possible applications as toxins and the research was supported by NSF, since the research results are being sent to foreigners only to allow them to comment on a proposed publication, a scholarly activity.
Case Study 2 Analysis

A. Is incorrect since research results being sent outside the U.S. only does not make them subject to export controls. For example, information resulting from research qualifying for the fundamental research exclusion may be sent outside the U.S.

B. Is the correct answer since possible applications as toxins suggests a technology with potential terrorist applications.

C. Is incorrect since Federal agencies may and do fund research subject to export controls.

D. Is incorrect. The facts indicate that export controlled information is being sent to foreign nationals. A benign intent is not part of the analysis.
Case Study 3

A Professor of Art History is seeking to travel to Iran in order to engage in an archeological dig. None of the equipment she is taking is listed on any export controlled list. The findings of the archeological dig will be published and widely available. Which of the following is a true statement?

A. The Professor will need to obtain a license to travel to Iran and engage in research activities there since Iran is a sanctioned country and the Professor’s activities will involve payment of funds to Iranian citizens.

B. The Professor will not need to obtain a license since the research activities involve fundamental research and the results may be published and made publicly available.

C. The Professor will need to obtain a license since she will be traveling and doing research outside the United States, and this is true regardless of the country involved.

D. Archeology is clearly an area of research unrelated to any of the issues associated with export controls and a license will not be necessary.
Case Study 3 Analysis

“A” is the correct answer. A license from the Office of Foreign Assets Control (OFAC) will be required.

The mission of OFAC is to “administer and enforce economic and trade sanctions based on U.S. foreign policy and national security goals against targeted foreign countries, terrorists, international narcotics traffickers, and those engaged in activities related to the proliferation of weapons of mass destruction.”

OFAC prohibits payments or providing “value” to nationals of sanctioned countries. Iran is such a country.
Case Study 4

A faculty member has a contract from the DOD for basic research in a scientific field which contains the following contract clause:

Disclosure of Information

University shall not release to anyone outside the University’s organization any unclassified information, regardless of medium (e.g., film, tape, document), pertaining to any part of this contract or any program related to this contract, unless

- The Contracting Officer has given prior written approval; or

- The information is otherwise in the public domain before the date of release.

Requests for approval shall identify the specific information to be released, the medium to be used, and the purpose for the release. The University shall submit its request to the Contracting Officer at least 45 days before the proposed date for release.
Case Study 4 (Continued)

Which of the following is a correct statement about the included “Disclosure of Information” clause?

A. Since this contract involves work that would qualify for the fundamental research exclusion, we do not need to be concerned with the impact of the clause: the research by definition is not subject to export control concerns.

B. Any contract involving funding from DOD would necessarily involve the potential for research with military applications. Hence, we do not need to consider the clause; the research by definition is subject to export control concerns.

C. The clause would be a restriction on publication, removing the research from a fundamental classification and hence would be subject to export control concerns.

D. Since the clause only requires the submission of the request for approval to publish 45 days before the proposed date of release, the delay on publications is small and, accordingly, the clause does not raise any concerns relating to export control compliance.
Case Study 4 Analysis

The publication clause seeks to control any unclassified information that DOD believes may be sensitive and inappropriate for release to the public. Any publication of research results would require prior approval from DOD. Thus, even though the research would qualify as fundamental research, the exclusion is destroyed by the publication restrictions. Transfer of research results to foreign nationals would require a license.

A. Is incorrect since the publication restrictions destroy the application of the Fundamental Research Exclusion.
B. Is incorrect since DOD contracts may involve research not subject to export controls.
C. Is the correct answer.
D. Is incorrect because publication requires prior approval, even if the time need to obtain approval is only 45 days.
Case Study 5

A small startup company receives a SBIR grant from the Army. As part of the planned research, the company will be subcontracting some work on the project to WPI. This work may be properly characterized as “basic and applied research” in engineering. As part of the work, the company will be providing technical data subject to export controls. You are working on a subcontract to the grant for a PI. The subcontract contains the following language:

Non-Disclosure: There shall be no dissemination or publication, except within and between the Company and WPI, of information furnished to WPI by Company pursuant to this contract without prior written approval of the Company. Information subject to this clause shall be clearly marked as proprietary or export-controlled.

Under the circumstances described which of the following statements is true:

A. This research project is subject to export controls since export controlled information is being provided to the PI by the Company.

B. If the SBIR grant is funded through the Army, there is clearly the potential for military applications of research results, regardless of the language in the clause, and the proposal is subject to export controls.

C. This research project is not subject to export controls since any export controlled information being provided to the PI by the Company could not appear in any publications by the PI without Company’s prior written permission.

D. None of the above.
Case Study 5 Analysis

The information generated by the University will not be subject to publication restrictions. The information may be released to the public domain. Since it is basic/applied research, the work qualifies for the Fundamental Research Exclusion. The technical data provided by the Company, subject to export controls above, is Company proprietary information which may be removed after Company review of publications.

“C” is the correct answer.

(Note, however, that steps will need to be taken to ensure that the Company’s transfer of the export controlled data to the WPI does not violate the export control regulations.)
Case Study 6

A PI at WPI is working with the South Korean Ministry of Science on research supported by NASA. The PI is developing instrumentation that will be placed on a satellite. The results of the research will be publicly available and published. The contracts with NASA and the South Korean Ministry of Science covering the research state that all parties will comply with export control laws. The research is basic and no restricted information will be received by the WPI PI. Which of the following statements is correct?

A. Since the research is fundamental and no publication restrictions apply, WPI will not need to apply for a license from the federal government to send the instrumentation from WPI to South Korea.

B. The instrumentation involves equipment that will be sent into space. Hence, it is covered by ITAR and a license will be necessary to ship the instrumentation to South Korea, even if the research leading to the instrumentation qualifies for the fundamental research exclusion.

C. Even though the research is fundamental and no restrictions apply, WPI will need to apply for a license from the federal government to send the instrumentation from WPI to South Korea since South Korea is a foreign nation.

D. None of the above.
CASE STUDIES AND ANALYSIS

Case Study 6 Analysis

Even though the project qualifies as fundamental research and the technical information/research results will be widely published, the facts describe the transfer of an actual physical piece of equipment to be launched into Space, and therefore, the instrumentation will automatically be subject to export controls under ITAR.

“B” is the correct answer.
Case Study 7

You have prepared a research proposal in response to a solicitation. One condition in the solicitation is a requirement that only citizens of the U.S. may participate in the conduct of the research funded under the solicitation. Which of the following is a correct statement?

A. The requirement limiting participation to U.S. citizens means that the research could be subject to export controls and the research proposal should be carefully reviewed to ensure that WPI and the PI can comply with the export control laws or modify the research proposal to remove export controls as a concern.

B. The condition only involves hiring and participation on the research funded under the proposal at WPI. This is work in the United States and there is nothing to indicate that any sort of “export” will take place, and as such, the research proposal does not need to be carefully reviewed for compliance with export control laws.

C. The question of whether careful review is needed to ensure compliance with export controls depends on the nature of the funding agency. If a private sponsor, such as a commercial corporation, there is need to review carefully for compliance with export control laws. If the sponsor is the Federal Government, the proposal is automatically exempt from export control laws.

D. None of the above.
Case Study 7 Analysis

A. Correct. The solicitation’s condition is of concern and needs to be carefully reviewed to ensure compliance with export controls. Because participation and access to research results are restricted (based on country of citizenship), the research proposal would not qualify for the Fundamental Research Exclusion and would be subject to export controls. Another concern from a policy point of view would be differential treatment of students and employees at WPI based on country of citizenship which would also be unacceptable.

B. Incorrect. Even for research activities on campus and even if no specific export is contemplated, limiting access and participation in the research based on country of citizenship would remove the research proposal from the fundamental research exclusion.

C. Incorrect. The nature of the Sponsor is not relevant to the analysis. The solicitation contains an access control. If the University decides to accept the award, the fundamental research exception will not apply.

D. Incorrect.