Export Control Compliance Program Guidelines
January 2012

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INTRODUCTION

Export controls and trade sanctions are the United States laws and regulations that regulate and restrict the release of critical technologies, software, equipment, chemical, biological materials and other materials, and services to foreign nationals and foreign countries for reasons of foreign policy and national security.

These laws apply to virtually all fields of science and engineering and restrict the shipment, transmission or transfer of certain commodities, software, technology, data and services from the U.S. to foreign countries. Deemed exports, i.e., the release of controlled information to foreign nationals located in the U.S., are also restricted under these laws and regulations. Export control laws apply to **all** activities – not just sponsored research projects.

An export is:
- Shipment of a controlled commodity, equipment, material, or software outside of the U.S.
- Disclosing controlled technology or technical data to a foreign national, whether in the U.S. or abroad
- Performing technical assistance or defense services for or on behalf of a foreign national, whether in the U.S. or abroad
- Exports within the U.S. are considered to be a "deemed" export to the foreign national's home country

The following high risk disciplines and programs have been designated for particular focus for export control compliance at the University of Massachusetts Amherst (UMA): Engineering, Physics, Astronomy, Polymer Science, Computer Science, Research with Lasers, Research with Encrypted Software, and Research with Controlled Chemicals, Biological Agents and Toxins.

The following are factors to consider in determining the applicability of export regulations:
1) Is the activity considered fundamental research? (Will research results be published and publicly available?)
2) Is the activity limited to teaching or instructional activities?
3) Is there a physical export of a good?
4) Are foreign nationals restricted from participating in the activity?
5) What is the Item's Export Control Classification Number (ECCN) or U.S. Munitions List (USML) category?
6) Where is it going (country)?
7) Who is the end-user (person or entity)? What is the intended end use?
8) Are you screening for persons or entities identified on any lists of sanctioned or barred persons or entities?
9) Is a license required? If so, is enough time allowed to secure one?
10) Will the activity involve a sanctioned or embargoed country?

These guidelines outline processes for members of the UMA community to follow to ensure that UMA is in compliance with all export control laws and trade sanctions.

UNIVERSITY of
MASSACHUSETTS AMHERST   Office of the Chancellor

374 Whitmore Administration Building   voice: 413.545.2211
181 Presidents Drive   fax: 413-545-2328
Amherst, MA 01003-9313   www.umass.edu

It is the policy of the University of Massachusetts Amherst to comply fully with U.S. export control and trade sanctions laws and regulations. U.S. laws and regulations that govern exports or access to certain information or technologies, or services by foreign persons inside the U.S., have received increased attention recently and have impacted programs at all major research universities. These laws and regulations are currently administered by various Federal agencies, chief among them the departments of Commerce, State and Treasury.

Because these laws and regulations involve many aspects of our enterprise and are receiving increased attention by the federal government, the University of Massachusetts Amherst (UMA) has appointed an Oversight Committee for Export Control Compliance (OCECC) with the membership listed below.

- ❖ Provost and Senior Vice Chancellor for Academic Affairs, James V. Staros
- ❖ Vice Chancellor for Research & Engagement, Michael F. Malone (OCECC Chair)
- ❖ Vice Chancellor for Administration & Finance, James P. Sheehan
- ❖ Chief Information Officer, John F. Dubach

The OCECC oversees export controls and trade sanctions compliance for the campus and with implementing departments, it develops and monitors procedures and record keeping systems to ensure compliance with the regulations.

While the University places a high priority on compliance with export regulations, it is also the mission and policy of University of Massachusetts Amherst to conduct instruction and research openly and without prohibitions on the dissemination of learning or research results. As a result, in most instances the requirements of U.S. export control laws can be satisfied through reliance on available exclusions, such as exclusions for educational information and information that is publicly available or in the public domain. Key among these exceptions is the fundamental research exclusion (FRE). Fundamental research is basic or applied research in science and engineering, the results of which are ordinarily published and shared broadly within the scientific community. Restrictions on the publication of research results and personnel access restrictions can invalidate the fundamental research exclusion. Also, it is important to understand that the FRE does not provide exclusion for the physical export of goods or materials (even where FRE applies to the research).

Export controls may also apply to the disclosure of certain kinds of information or technology to foreign nationals inside the United States, because these are "deemed exports" under the regulations. An export license may be required before initiating these activities.

Additionally, the Amherst campus demands strict compliance with the Office of Foreign Assets Control (OFAC) regulations governing transactions with embargoed countries and prohibited entities and individuals. A license from OFAC may be required for certain transactions.   The Office of Research Compliance under the Vice Chancellor for Research & Engagement will facilitate legal advice and a license application if one is necessary for your university activities; note that this is the only authorized means to apply for licenses required under export regulations.

Faculty, administrators and staff are required to be aware of and comply with the export regulations and UMA's written guidance and procedures regarding them. Faculty are responsible for securing their research and technology, chemicals and biological materials, and proprietary and Government articles or information entrusted to them against unauthorized use or theft. Faculty are also responsible for screening any potential foreign research collaborator and foreign visitor against "Lists to Check" at http://www.bis.doc.gov/complianceandenforcement/liststocheck.htm to ensure that person is not embargoed or sanctioned and to ensure that the proposed end use is appropriate. Faculty, administrators, and staff are expected to contact the OCECC should they have any questions about the application of U.S. export controls or trade sanctions to their research or other activities and should report any potential violations or concerns directly to the OCECC.

FEDERAL LAWS, REGULATIONS, AND PENALTIES

Three U.S. Government agencies have primary export control regulatory responsibilities. The Department of Commerce through its Export Administration Regulations (EAR), the State Department through its International Traffic in Arms Regulations (ITAR) and the Arms Export Control Act (AECA), and the Treasury Department through the Office of Foreign Assets Control (OFAC) administer the export control laws and trade sanctions. The Commerce Department administers the Commerce Control List (CCL) and the State Department administers the U.S. Munitions List (USML).

The U.S. Government controls exports on a case-by-case basis, examining four factors: the destination, the good, software, technology or service, the end-user, and its end-use.

Mechanism	Governing Department	Covers
EAR	Commerce	Dual-use goods, technology, chemicals and software
ITAR	State	Military items; space-related technology and research
OFAC	Treasury	Trade prohibitions with sanctioned countries/entities

EAR and ITAR apply to the transfer of specific physical items and information and the provision of specific services to persons and entities *outside* the U.S. (exports) and to the disclosure of specific information and the provision of specific types of services to foreign nationals *inside* the U.S. (deemed exports).

OFAC regulations restrict transactions with embargoed and sanctioned countries, persons and organizations involved in terrorism, drug trafficking and proliferation of weapons of mass destruction. Even when exclusions to EAR or ITAR apply, OFAC may prohibit payment, travel and the transfer of items, assets, and services of value to sanctioned nations (check the OFAC website www.treas.gov/ofac for the latest information about embargoed countries).

The majority of exports do not require government licenses. Only commodities, software and technology that the U.S. Government considers "subject to the EAR" and ITAR controlled items require licenses. Export controlled transfers usually are required for one of the following reasons:
- The nature of the export has actual or potential military applications or economic protection issues
- Government concerns about the destination country, organization, or individual
- Government concerns about the declared or suspected end use or the end user of the export

Even if an item appears on lists of controlled items, there may be exemptions, exclusions or exceptions that apply, such as the exclusion for "fundamental research". For research to be considered "fundamental research" there cannot be personnel access restrictions or publication restrictions that apply.

The University will assist any member of the University community in complying with export control laws and trade sanctions, including securing licenses from U.S. Government agencies, where appropriate. However, the primary responsibility rests with the faculty member or

researcher as the individual most informed about the contemplated project and the technical nature and properties of the goods, software and technology.

Faculty and other researchers are responsible for:

- Knowing classification of and export compliance requirements for the equipment, software, chemicals, materials and technology they handle, lease or procure;
- Knowing whether the proposed research project will be subject to export control restrictions due to publication or other dissemination restrictions or personnel access restrictions;
- Knowing the classification of and export compliance requirements for company proprietary information they receive under a confidentiality obligation;
- Having an effective security plan to protect export controlled information in their possession, taking into account foreign nationals under their invitation, sponsorship or supervision;
- Complying with all export control requirements that apply to physical shipments, including proper shipping permits and making Automated Export System (AES) filings;
- Making export control analysis (including screening for sanctioned or embargoed persons, entities and countries) prior to foreign travel, sponsoring foreign visitors at UMA, engaging in research with foreign collaborators, engaging in research sponsored by foreign persons or conducting research in foreign countries

More information, materials and forms are available on the Research & Engagement website at: http://www.umass.edu/research/export-control

For step-by-step instructions on how to determine the ECCN of any good, software or technology follow the instructions on the Department of Commerce web page at http://www.bis.doc.gov/licensing/exportingbasics.htm Also, there is free online training available from the Department of Commerce at: http://www.bis.doc.gov/seminarsandtraining/seminar-training.htm

A helpful tool for analyzing exclusions under the EAR for publicly available information is the Questions and Answers – Technology and Software Subject to the EAR which is found in Supplement 1 to part 774 of the EAR at http://www.bis.doc.gov/policiesandregulations/ear/734.pdf

Other Federal Laws
In addition to export control laws, select agents and toxins are also regulated by the Centers for Disease Control and Prevention and the Department of Agriculture. For more information about the regulations refer to http://www.selectagents.gov/index.html However, these materials are not exclusively regulated by the CDC and USDA. Release of these materials ordinarily requires an export license even where transfer exceptions may be available under select agents and toxins regulations.

Other activities are exclusively regulated by other laws and agencies. Examples include the Nuclear Regulatory Commission, the Department of Energy, the Food and Drug

Administration, and the Drug Enforcement Agency, and those laws and regulations must be consulted and complied with.

Penalties

There are severe civil and criminal penalties, including fines and imprisonment, for violating the export control laws and trade sanctions and both the organization and the individuals involved are subject to these penalties. The University and the individual(s) involved may also lose their ability to export. The University may be suspended or debarred from government contracting. The criminal and civil penalties for unlawful export and disclosure of information in violation of U.S. export control laws and trade sanctions include the following, depending on the items involved and the jurisdiction:

EAR: Criminal violations by a university can incur penalties up to $1 million for each willful violation. For individuals, these penalties can reach up to $1 million or 20 years imprisonment, or both, per violation. Civil penalties for both the university and individuals can reach up to $250,000 per violation, or two times the value of the export, whichever is greater. These violations can also result in a denial of export privileges as well as other potential collateral penalties

ITAR: Criminal penalties can reach up to $1 million per violation and 10 years imprisonment for individual willful violations. Civil penalties imposed upon departments, agencies, and officials can reach up to $500,000 per violation. A university found to be in violation of ITAR regulations can be debarred from contracting with the government and could lose its export privilege.

OFAC: Penalties will range depending upon the sanction regime in question. Criminal violations by a university can reach up to $1 million, and criminal penalties for individuals can reach $1 million or 20 years in prison, or both. Civil penalties can be imposed up to $250,000 per violation, or two times the transaction in question, or both.

KEY TERMS AND DEFINITIONS

Even common words have very specific meanings within the export control laws. Here are a few commonly used words. For additional guidance, EAR definitions are located at: http://www.bis.doc.gov/policiesandregulations/ear/772.pdf . ITAR definitions are located at: http://www.pmddtc.state.gov/regulations_laws/documents/official_itar/ITAR_Part_120.pdf.

Commerce Control List (CCL) - List of items under the export control jurisdiction of the Bureau of Industry and Security, of the Department of Commerce. The CCL is found in Supplement 1 to Part 774 of the EAR.

The CCL is divided into ten categories: (0) Nuclear Materials, Facilities and Equipment, and Miscellaneous; (1) Materials, Chemicals, "Microorganisms," and Toxins; (2) Materials Processing; (3) Electronics Design, Development and Production; (4) Computers; (5) Telecommunications; (6) Sensors; (7) Navigation and Avionics; (8) Marine; (9) Propulsion Systems, Space Vehicles, and Related Equipment.

Every CCL category is subdivided into the same five groups, designated by the letters A through E, as follows: (A) Equipment, assemblies, and components; (B) Test, inspection and production equipment; (C) Materials; (D) Software; and (E) Technology.

Deemed Export – Whenever a foreign national on U.S. soil (or abroad) may be exposed to or is able to access in any manner export-controlled technology or software (EAR) or technical data required for the development, production or use of controlled articles, or performance of a defense service (ITAR). EAR citation is 15 CFR 734.2(b). ITAR citation is 22 CFR 120.17. Deemed exports do not include the mere transfer or access to controlled articles or materials without any associated information. It is "deemed" to be an export to the home country of the foreign entity or individual. Deemed exports may occur through such means as a demonstration, oral briefing, or laboratory visit, as well as the electronic transmission of non-public information or software. More information about "deemed exports" is available here: http://www.bis.doc.gov/deemedexports/deemedexportssupplementqa.html

Deemed Re-export – The release of controlled technology by a foreign national who has been licensed to receive it to the national of another foreign country who has not been licensed to receive the controlled technology. For example, ECCN 5E001 technology may be exported to a university in Ireland under the license exception for technology and software, but might require a deemed re-export license authorization before being released to a Russian foreign national student or employee of that university in Ireland.

Defense Article - Any item designated in the U.S. Munitions List. These items consist of articles which are specifically designed, developed, configured, adapted or modified for military application and related technical data. Examples include specified chemical agents, cameras designated for military purposes, specified lasers, and some GPS equipment and any directly related technical data. (ITAR 120.6)

Defense Service - Providing of assistance (including training) anywhere (inside the United States or abroad) to foreign persons in connection with the design, development, engineering, manufacture, production, or use of a defense article, and the furnishing of any

related technical data. (ITAR 120.9) The *Bona Fide* Employee Exemption [ITAR 125.4(b)(10)] does not apply to where the employee will be provided a Defense Service.

Debarred Parties List - List of individuals denied export privileges under ITAR and maintained by the State Department. Information can be accessed from http://www.bis.doc.gov/complianceandenforcement/liststocheck.htm.

Denied Persons List - A list of persons who have been issued a denial order from the Commerce Department's Bureau of Export Administration (BXA). U.S. exporters and third parties in general are prohibited from dealing with these persons in transactions involving U.S. items. The list can be accessed from http://www.bis.doc.gov/complianceandenforcement/liststocheck.htm.

Dual-Use - Items that have both commercial and military or proliferation applications. While this term is used informally to describe items that are subject to the EAR, purely commercial items are also "subject to the EAR" (see §734.2(a) of the EAR). Items with no specific ECCN are designated as "EAR99."

Educational Information – Under the EAR, information taught in course catalog courses and teaching laboratories associated with these course catalog courses are not export controlled. (Encryption software with symmetric key length exceeding 64 bits does not meet this exclusion.) 15 CFR 734.9 Under the ITAR, information or software concerning general scientific, mathematical or engineering principles commonly taught in universities or information in the public domain are not subject to export controls. 22 CFR 120.10 –11.

Entity List – Exports to foreign end-users engaged in proliferation activities are usually prohibited without a license. These are administered on a case-by-case basis. The list can be accessed at http://www.bis.doc.gov/entities/default.htm

Export - Includes any of the following: 1) actual shipment of any covered goods or items; 2) the electronic or digital transmission of any covered goods, items or related goods or items; 3) any release or disclosure, including verbal disclosures or visual inspections, of any controlled technology, software or technical data to any foreign national; or 4) actual use or application of controlled technology on behalf of or for the benefit of any foreign entity or person anywhere.

Export Administration Regulations (EAR) - Regulations promulgated and implemented by the Department of Commerce that regulate the export of goods, software and related technology identified on the Commodity Control List (CCL), Title 15 CFR 774, Supplement 1. The EAR also includes export restrictions, sanctions and embargoes to specified persons, entities and countries.

Export Control Classification Number (ECCN) - Identifies the Commerce Control List classification and related export requirements of commodities, software and technology subject to the export licensing authority of the Department of Commerce, Bureau of Industry and Security. All commodities, software and technology not specifically identified on the CCL are classified as "EAR99."

Foreign National – Under the EAR, means any person who is not a citizen or permanent resident of the United States. Under the EAR, the term applies to "persons lawfully admitted for permanent residence in the United States and does not apply to persons who are protected individuals (i.e. has been admitted as a refugee or granted asylum). The term also refers to foreign entities.

Foreign Person - The ITAR uses the term "foreign person" rather than "foreign national" and it applies to any natural person who is not a lawful permanent resident or who is not a "protected individual", and may also include any corporation, business association, partnership society, trust or any other entity, organization or group that is incorporated to do business in the United States. This also includes any governmental entity.

Fundamental Research – Under the EAR and the ITAR, fundamental research means basic or applied research in science and engineering performed or conducted at an accredited institution of higher learning in the United States where the resulting information is ordinarily published and shared broadly in the scientific community. Fundamental research is distinguished from research that results in information that is restricted for proprietary reasons or national security reasons (EAR) or pursuant to specific U.S. government access and dissemination controls (ITAR).

Fundamental Research Exclusions - EAR provides that university research normally will be considered as fundamental research unless the university or its researchers accept personnel access restrictions or restrictions on publication of scientific and technical information resulting from the project or activity. The EAR specifically permits limited prepublication reviews by research sponsors to prevent inadvertent divulging of proprietary information provided to the researcher by the sponsor or to insure that publication will not compromise any patent rights. The EAR citation is 15 CFR § 734.8.

The ITAR states that university research will not be deemed to qualify as fundamental research if: (1) the university or its researchers accept any restrictions on publication of scientific and technical information resulting from the project or activity; or (2) the research is federally funded and specific access and dissemination controls protecting information resulting from the research have been accepted by the university or the researcher. The ITAR citation is 22 CFR § 120.11(8).

Note: Under the EAR and ITAR, even if no publication restriction exists, the fundamental research exclusion does not apply to the physical export of goods.

Good - Any article, natural or man-made substance, material, supply, or manufactured product, including inspection and test equipment, and excluding technology.

Immigration sponsor letter – any letter or correspondence offered to the U.S. Bureau of Citizenship and Immigration Services (USCIS) on behalf of a Visa applicant upon which USCIS would rely for the purposes of issuing a Visa application.

International Traffic in Arms Regulations (ITAR) - 22 CFR Sections 120-130, are the regulations promulgated and implemented by the Department of State which regulate defense articles and defense services and related technical data listed on the U.S. Munitions

Control List (USML), 22 CFR § 121. The USML is available at:
http://www.pmddtc.state.gov/regulations_laws/itar_consolidated.html

Lists to Check – all transactions with potential export restrictions should be checked against the published lists of prohibited countries, persons and entities before proceeding. All of the lists can be accessed from
http://www.bis.doc.gov/complianceandenforcement/liststocheck.htm

OCECC – The UMA Oversight Committee on Export Control Compliance is the executive management committee charged with oversight and monitoring of the campus' export control compliance program. The OCECC convenes and oversees the Implementation Committee of key stakeholders and responsible departments for the development, monitoring and deployment of Standard Operating Procedures (SOPs) implementing these guidelines.

OVCRE – The UMA Office of the Vice Chancellor for Research & Engagement is the lead executive area for coordination of export compliance. The Office of Research Compliance (ORC) is the OVCRE office changed with export control compliance administration and oversight. The Vice Chancellor for Research & Engagement chairs the OCECC and the Director of Research Compliance leads the Implementation Committee.

ORC – The Office of Research Compliance (ORC) is the lead administrative office for export control compliance and relies upon cooperation of other implementing departments such as the International Programs Office (IPO), Procurement, Human Resources, Travel, etc, to ensure compliance with these guidelines and for the development of Standard Operating Procedures (SOPs) to implement them.

Public Domain – Under the ITAR, information that is published and that is generally accessible or available to the public are not export controlled. Examples include: (a) sales at newsstands and bookstores; (b) subscriptions that are available without restriction to any individual who desires to obtain or purchase the published information; (c) second class mailing privileges granted by the U.S. government; (d) libraries open to the public or from which the public can obtain documents; (e) published patent applications and issued patents; (f) unlimited distribution at a conference, meeting, seminar, trade show, or exhibition, generally accessible to the public, in the United States; (g) any public release after approval by the cognizant U.S. government agency; and (h) 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. 22 CFR 120.11

Publicly Available – The EAR uses the term "publicly available" rather than "public domain." Under the EAR, information is publicly available when it becomes generally accessible to the public. In addition to the examples listed above, the EAR specifically provides that software that is available for general distribution is publicly available (except for encryption software with symmetric key length exceeding 64 bits). 15 CFR 734.7

Reexport - An actual shipment or transmission of items subject to export regulations from one foreign country to another foreign country. For the purposes of the EAR, the export or re-export

of items subject to the EAR that will transit through a country or countries to a new country, or are intended for reexport to the new country, are deemed to be exports to the new country.

Sanctioned Country – Even when exclusions to EAR or ITAR apply, U.S. Treasury Department, Office of Foreign Assets Control may prohibit payment, travel and the transfer of items, assets, and services of value to sanctioned nations (check the OFAC website www.treas.gov/ofac for the latest information about embargoed countries).

Specially Designated Nationals (SDN) - Any person who is determined by the U.S. Secretary of the Treasury to be a specially designated national for any reason under regulations issued by the Office of Foreign Assets Control. U.S. persons are prohibited from having transactions with the persons listed in the Specially Designated Nationals List. The listed is located at http://www.treas.gov/offices/enforcement/ofac/sdn/

Technical Assistance - Technical assistance may take forms such as instruction, skills training, working knowledge, consulting services, and may also involve the transfer of technical data.

Technical Data - Information required for the design, development, production, manufacture, assembly, operation, repair, testing, maintenance, or modification of controlled articles. This includes information in the form of blueprints, drawings, plans, instructions, diagrams, photographs, models, formulae, tables, engineering designs and specifications, manuals and instructions written or recorded on other media or devices such as disk, tape, or read-only memories. The ITAR definition does not include information concerning general scientific, mathematical, or engineering principles commonly taught in schools, colleges, and universities, or information in the public domain, general system descriptions, or basic marketing information on function or purpose. (ITAR Ch. 120.10).

Technology - Any specific information and know-how (whether in tangible form, such as models, prototypes, drawings, sketches, diagrams, blueprints, manuals, software, or in intangible form, such as training or technical services) that is required for the development, production, or use of a good, but not the good itself. The information takes the form of technical data or technical assistance. *See* definition of "**use**" below.

Use - Technology for operation, installation (including on-site installation), maintenance (checking), repair, overhaul and refurbishing of a good.

TRAINING PROGRAM

The training program is a critical component of maintaining compliance with export control laws. The primary goal of training is to increase awareness of and maintain compliance with export control laws and trade sanctions. The program will educate the UMA community of its responsibilities under these laws and the UMA procedures in place for ensuring compliance. It is especially critical that faculty and administrative staff that direct or participate in research projects involving export controlled goods, technology or software participate in training provided through the Office of Research Compliance (ORC).

Training Topics

Training includes an overview of the purpose of export controls, how export regulations apply to different activities, review of definitions and regulations, the importance of compliance, description of the high risk disciplines, and the types of exclusions, exemptions and exceptions that commonly apply. In addition, training covers security measures that should be followed, steps to follow for physical exports, instruction on how to determine the CCL or USML designation of items, information about applying for a license, when to suspect export control violations and red flags, internal review procedures, the importance of training, the importance of utilizing the ORC as a resource, and reporting of suspected violations.

The following introductory topics will be covered in faculty, staff and student training:
- Purpose of U.S. export control laws and UMA Export Control Guidelines
- Regulatory agencies controlling exports
- What is an Export and What Regulations Apply
- Deemed Exports and Foreign Nationals Defined
- U.S. Munitions List and Commerce Control List
- Fundamental research and educational information exclusions
- Campus Contacts for Further Assistance
- FAQs; Questions and Answers

Other topics included in introductory and/or intermediary training:
- General Prohibitions on End Use and End Users
- Screening Customers Using Lists of Denied and Restricted Persons and Countries
- How to detect suspicious and inconsistent behavior (red flags)
- Screening for Embargoed Countries
- Examples of common license exceptions
- Who to contact about questionable transactions
- Enforcement of violations and severe sanctions and penalties

Advanced training topics for faculty, administrative staff and students include:
- Contract language that restricts publication or personnel access
- Foreign sponsorship of research
- Physical export of goods and materials
- Nondisclosure agreements with foreign entities or persons
- Materials transfer agreements with foreign entities or persons
- Teaching or training activities that use or implement licensed technology

Department Training
Special efforts will be taken to ensure that all departments in high risk disciplines such as Engineering, Physics, Astronomy, Polymer Science, Computer Science, Research with Lasers, Research with Encrypted Software, and Research with Controlled Chemicals, Biological Agents and Toxins receive training. For example, training may be scheduled during department meetings or other times which are convenient for those departments.

License Training and Briefings
One-on-one training will be provided by the ORC to researchers who are involved in projects confirmed to involve export controlled technology. The type of training, date, and who was trained is recorded and kept on file by the ORC.

Other Materials
While some training will be classroom style with opportunity for questions and discussion, additional information may be provided in the form of email notifications and announcements, online training and information, and invited speakers. Useful materials and forms are available on the Research & Engagement website at http://www.umass.edu/research/export-control.

Training Timelines
Formal training events will be scheduled at a minimum annually. One-on-one faculty and administrative staff training is scheduled as necessary throughout the year by contacting the ORC. In addition, export control training events are posted on the website at http://www.umass.edu/research/training

Training Records
All records of training sessions will be maintained by the ORC for a period of five years. The records shall include date and place of training, sign-in sheets signed by persons attending, list of speakers, and the subjects covered.

REGULATED ITEMS

ITAR Controlled Items

The Department of State Directorate of Defense trade Controls (DDTC) administers export control of defense items under the International Traffic in Arms Regulations, 22 CFR 120-130, pursuant to the Arms Export Control Act (AECA). Three terms are used to designate export controlled ITAR items: "defense articles," "technical data," and "defense services." An item that also contains any ITAR controlled component, then is also controlled under the ITAR.

> *Defense Article* means any piece of equipment (or component or part thereof), or technical data (as defined below), that is specifically designed, developed, configured, adapted, or modified for a military, missile, space, satellite, or other controlled use listed on the USML.

> *Technical Data* means any information which is required for the design, development, assembly, production, operation, repair, testing, maintenance, or modification of a defense article. Technical data may include drawings or assembly instructions, operations and maintenance manuals, seminars, meetings tours, visits and email or telephone exchanges where such technical data or information is discussed. However, technical data does not include general scientific, mathematical, or engineering principles commonly taught in universities, information in the public domain, general system descriptions, or basic marketing information on function or purpose.

> *Defense Services* means providing assistance, including training, to a foreign person in the United States or abroad in the design, development, engineering, manufacture, production, or operation of a defense article, as well as providing any related technical data to foreign persons. Defense services may include informal collaborations, conversations, or interchanges concerning technical data.

For details about the International Traffic in Arms Regulations, go to the website at:
http://www.pmddtc.state.gov/regulations_laws/itar_official.html

Definition of Export Under the ITAR

The ITAR defines the term 'export' broadly. The term applies not only to exports of tangible items from the U.S. but also to transfers of intangibles, such as technology or information. The ITAR includes the release of controlled technical data to foreign nationals even in the U.S.

Authorization to Export

Any U.S. person or entity that manufacturers, brokers, or exports defense articles or defense services must secure a license prior to any export. Excluded from these regulations are activities limited to the creation of unclassified technical data, or the fabrication of defense articles for experimental or scientific purpose, including research and development. UMA does not engage in the manufacture of defense articles.

Items Subject to the EAR

The Department of Commerce Bureau of Industry and Security regulates the export of commercial products, software and technology under the Export Administration Regulations (EAR), 15 CFR §§ 730-774. The EAR covers a wider range of products and technology, the product classification process is highly technical, and most importantly, the need for a license depends not only on the type of product but on its final destination.

Generally, all items of U.S. origin, or physically located in the U.S. are subject to the EAR. Foreign manufactured goods are generally exempt from the EAR re-export requirements if they contain less than a *de minimus* level of U.S. content by value. The EAR requires a license for the exportation of a wide range of items with potential 'dual' commercial and military use, or otherwise of strategic value to the U.S. (but not made to military specifications). However, only items listed on the Commerce Control List (CCL) require a license prior to exportation. The items are designated by "ECCNs." Items not assigned an ECCN are designated as "EAR 99" and can generally be exported without a license, unless the export is to an embargoed country, or to a prohibited person or end-use. Items are further organized into 5 groups as follows:

> *Commodities* means finished or unfinished goods ranging from high-end microprocessors, to airplanes, to ball bearings.
>
> *Manufacturing Equipment* includes equipment specifically for manufacturing or testing controlled commodities, as well as certain generic machines, such as computer numerically controlled manufacturing and test equipment.
>
> *Materials* includes certain alloys and chemical compounds.
>
> *Software* includes software specifically associated with particular commodities or manufacturing equipment, as well as any software containing encryption and the applicable source code.
>
> *Technology* means information required for the development, production or use of a good and takes the form of technical data and technical assistance. For some ECCNs, there may be a distinction between technology for the "use" of a product and the technology for the "design" or "manufacture" of the product.

For details about the CCL, go to http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=2f218f17d3e9d4d8f1d488381d5b0da8&rgn=div5&view=text&node=15:2.1.3.4.45&idno=15#15:2.1.3.4.45.0.1.3.87. For the EAR regulations, go to http://www.pmddtc.state.gov/regulations_laws/itar_official.html

Export Control Classification Number (ECCN)

Goods, software and technology on the CCL are primarily commercial in nature not military. (Items that have military application are covered under ITAR.) The CCL categorizes the goods and related technology covered into ten topical categories. Items are

further designated by Export Control Classification Numbers (ECCNs). Items not assigned a specific ECCN fall under a catch-all category called "EAR99."

The fundamental difference in the EAR and ITAR is the EAR is concerned with "dual use" items (items designed for potential commercial purposes that can have military applications) and the ITAR with those that are inherently military in nature. Another difference is the treatment of fundamental research. In the ITAR, is it subsumed under "public domain" and in the EAR it is a separate and distinct category. In general, the EAR is clearer and more specific in its coverage than the ITAR.

In order to know whether you may export a dual use item, first you have to know how it is designated under the Commerce Control List (CCL) and check for license exceptions. Second, you have to check the Country Chart. Third, you have to check the proposed end- use. Fourth, you have to check the proposed end-user. The flow chart that follows shows the steps to determining whether or not a license is required under the EAR.

In determining the classification of an entire system, you generally consider the nature of the entire assembled system rather than the classification of individual components (with the exception of included information technology or encryption software). There are some helpful interpretations to assist you. See Interpretations 2 and 13 at 15 CFR 770.2. (By comparison, under the ITAR, a component that contains one single ITAR-controlled item would make the entire assembled system controlled.)

For step-by-step instructions on how to determine the ECCN of any commodity, software or technology follow the instructions on the Department of Commerce web page at http://www.bis.doc.gov/licensing/exportingbasics.htm Also, there is free online training available from the Department of Commerce at: http://www.bis.doc.gov/seminarsandtraining/seminar-training.htm

Determining Your License Requirements Under the Export Administration Regulations (EAR)
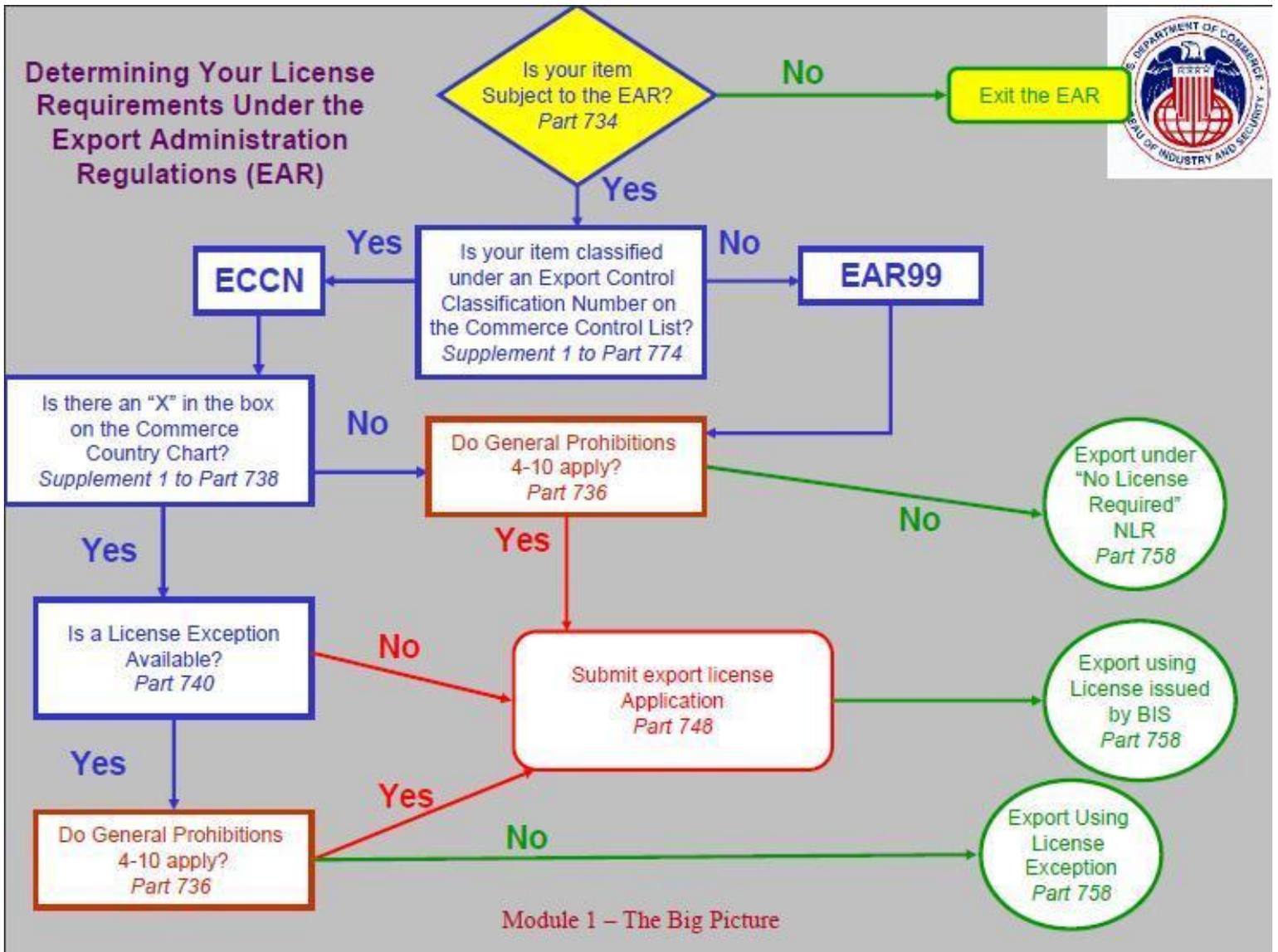
Module 1 – The Big Picture

KEY ISSUES IN UNIVERSITY ACTIVITIES

Export regulations require attention to several considerations in a University setting. Considerations and subsequent actions depend on evaluation of the recipient, the destination, involvement of controlled technology, and governmental jurisdiction to determine how the regulations apply and whether a license must be obtained. Most activities conducted at UMA are likely to qualify for license exclusions for information that is Publicly Available or in the Public Domain, such as the Educational Information Exclusion and the Fundamental Research Exclusion. Otherwise an export license may be required to allow for participation by foreign nationals or for foreign research collaborations. A helpful tool for analyzing exclusions under the EAR is the Questions and Answers – Technology and Software Subject to the EAR which is found in Supplement 1 to part 774 of the EAR or at http://www.bis.doc.gov/policiesandregulations/ear/734.pdf.

Fundamental Research Exclusion (FRE)
The term "fundamental research" means basic or applied research in science and engineering, the results of which are ordinarily published and shared broadly within the scientific community. Fundamental research 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. Both the ITAR and EAR provide that information resulting from fundamental research is not subject to export controls. This is referred to as the Fundamental Research Exclusion (FRE).

Specifically, the EAR provides that the fundamental research exclusion applies so long as the university and its researchers do not accept restrictions on publication of scientific and technical information resulting from the project or activity, or personnel access restrictions. The EAR specifically permits customary prepublication reviews by research sponsors to prevent inadvertent divulging of proprietary information provided to the researcher by the sponsor or to insure that publication will not compromise any patent rights. The EAR citation is 15 CFR § 734.8. Access and dissemination controls in government contracts with national security agencies normally do not trigger a license requirement as long as the university otherwise follows any national security controls imposed in the contract (15 CFR 734.11(a)).

By comparison, the ITAR states that university research will not be deemed to qualify as fundamental research if: (1) the university or its researchers accept any restrictions on publication of scientific and technical information resulting from the project or activity; or (2) the research is federally funded and specific access and dissemination controls protecting information resulting from the research have been accepted by the university or the researcher. The ITAR citation is 22 CFR § 120.11(8).

The Office of Grant and Contract Administration (OGCA) and the ORC carefully review proposed research projects to ensure the scope of the work qualifies for the fundamental research exclusion. If further reviews are needed, ORC undertakes a complete export control analysis with technical assistance from the PI and input as needed from University's Office of the General Counsel (OGC) and, if necessary, outside counsel.

Verbal or written 'side deals' between a PI and sponsor to forego publication will invalidate the FRE and violate university policies that require that research shall be conducted openly and without prohibitions on the publication and dissemination of the results.

Under the EAR and ITAR, even if no publication restrictions or personnel restrictions apply, the fundamental research exclusion does not apply to the <u>physical</u> shipment of goods.

The use of sponsor or third-party trade secrets or other proprietary information in a research project which are subject to a confidentiality obligation will continue to be subject to export controls even though the research and the research results are covered by FRE. The EAR citation is 15 CFR § 734.8(b)(4). See illustration on next page.

A deemed export may occur if information, which is not otherwise publicly available, about the development, production or use of controlled articles is released to a foreign national. "Use" in this context means information about the operation, installation, maintenance, repair, overhaul **and** refurbishing of a controlled article. EAR Part 772. All five aspects of use must be present to cause an export to occur. When instruction on use is based on a publicly available manual, the instruction is considered publicly available and not subject to the EAR.

Educational Information Exclusion
One of the most important exclusions from the EAR and ITAR export regulations that applies to universities is the exclusion for educational information. Under the EAR, information and software taught in course catalog courses and teaching laboratories associated with these course catalog courses are not export controlled. (Encryption software with symmetric key length exceeding 64 bits does not meet this exclusion.) 15 CFR 734.9

Under the ITAR, information or software concerning general scientific, mathematical or engineering principles commonly taught in universities or information in the public domain are not subject to export controls. 22 CFR 120.10–11.

Publicly Available Information / Public Domain

All information that is publicly known is also not subject to export controls (with the exception of encryption software with symmetric key length exceeding 64 bits). Under the ITAR, information that is published and that is generally accessible or available to the public are said to be in the "public domain" and not export controlled. Examples include: (a) sales at newsstands and bookstores; (b) subscriptions that are available without restriction to any individual who desires to obtain or purchase the published information; (c) second class mailing privileges granted by the U.S. government; (d) libraries open to the public or from which the public can obtain documents; (e) published patent applications and issued patents; (f) unlimited distribution at a conference, meeting, seminar, trade show, or exhibition, generally accessible to the public, in the United States; (g) any public release after approval by the cognizant U.S.

Universe of Research

Adapted from Alex Lopes, Department of Commerce
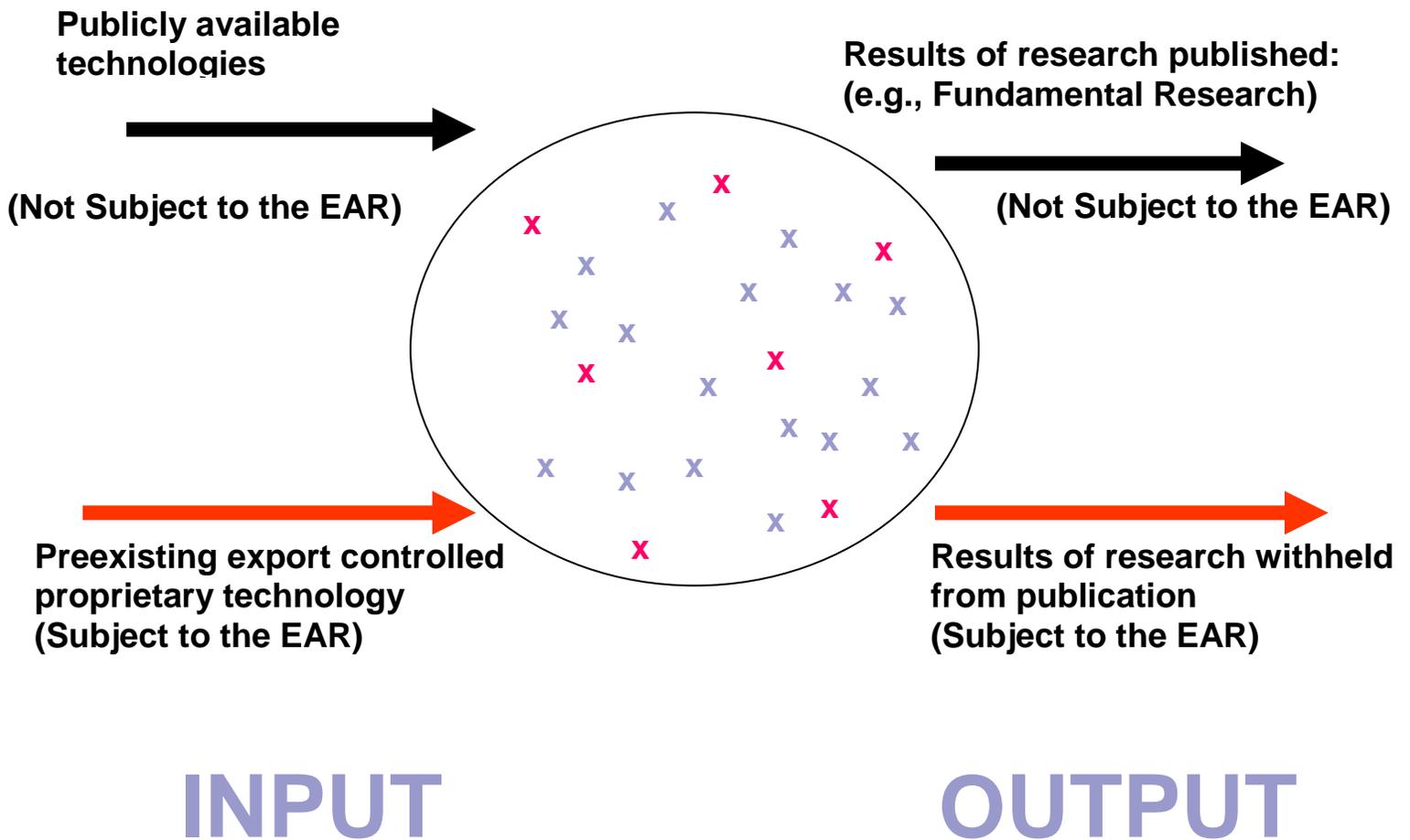
Publicly available technologies

→

(Not Subject to the EAR)

Preexisting export controlled proprietary technology (Subject to the EAR)

→

Results of research published: (e.g., Fundamental Research)

→

(Not Subject to the EAR)

Results of research withheld from publication (Subject to the EAR)

→

INPUT

OUTPUT

government agency; and (h) 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. 22 CFR 120.11

The EAR uses the term "publicly available" rather than "public domain." Under the EAR, information is publicly available when it becomes generally accessible to the public. In addition to the examples listed above, the EAR specifically provides that software that is available for general distribution is publicly available (except for encryption software with symmetric key length exceeding 64 bits). 15 CFR 734.7

Physical Exports
If a physical export is necessary, a sequential analysis should begin with jurisdiction determination and then the classification process. The researcher is typically the best – and typically the *key* – person to assist with the determination of the Commerce Department ECCN classification of the item. An alphabetical guide to the Commerce Control List can be found at http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=2f218f17d3e9d4d8f1d488381d5b0da8&rgn=div5&view=text&node=15:2.1.3.4.45&idno=15#15:2.1.3.4.45.0.1.3.87 to help with the classification.

Using the ECCN, it must be determined whether an export license is required. You are also required to know your customer and evaluate how the export will be used. The lists of barred or prohibited countries, persons and entities must be checked in the vetting process. For shipment of items subject to the EAR, you must check whether General Prohibitions 4-10 apply. EAR Part 736. If any 'red flags' are indicated, the concerns must be addressed satisfactorily or the shipment should be aborted. In some instances, license exceptions may apply. The ORC can help make these determinations. The process may include completing a Request to Ship Materials Out of the U.S. and having an End User Certification Form completed by the end user.

For exports requiring a license and all shipments of goods having a value greater than $2500, an AES filing with the U.S. Census Bureau must be filed. The filing must indicate either the applicable ECCN or that a license exception applies. Information is available here: http://www.bis.doc.gov/exportlicensingqanda.htm Contact the ORC for assistance with this process.

Deemed Exports
While exports are commonly associated with the physical shipment of materials across a U.S. border, export controls are much broader. They also include the transfer of technology or software, technical data, or performance of defense services to foreign nationals even when the transfer takes place within the U.S. This transfer is "deemed" to be an export. The issue of deemed exports is particularly relevant for university environments where students and faculty from every corner of the globe engage in teaching and research activities together. In many instances, the requirements of the export control laws can be appropriately satisfied through reliance on available exclusions from export controls, such as exclusions for educational information, and exclusions for information that is publicly available or in the public domain, including the fundamental research exclusion. UMA is

committed to ensuring these exclusions are relied upon and satisfied. For example, with respect to fundamental research, it is the policy of UMA that research shall be conducted openly and without prohibitions on the publication and dissemination of the results.

A "deemed export" under the ITAR involves the export within the United States to a foreign person of technical data, in other words information or software, required for the development, production or use of defense articles included in the USML. Technical data does not include information or software concerning general scientific, mathematical, or engineering principles commonly taught in universities, or information in the public domain, or general system descriptions, or basic marketing information on function or purpose. A deemed export under ITAR also includes performing a defense service on behalf of a foreign person.

A "deemed export" under the EAR involves the export within the United States to a foreign national of technology or software required for the development, production or use of a good. Importantly, information about "use" must include **all** of the following to constitute a deemed export: operation, installation, maintenance (checking), repair, overhaul **and** refurbishing. EAR Part 772. If the foreign national has access only to the technology that is necessary to operate the export controlled equipment, a release of "use" technology has not occurred. Further, the deemed export rule does not regulate the mere operation of controlled equipment. More information is available here: http://www.bis.doc.gov/deemedexports/deemedexportssupplementqa.html Deemed exports could occur through such means as a demonstration, oral briefing, or laboratory visit, as well as the electronic transmission of non-public information or software. Specific reference must be made to the relevant ECCN because what constitutes "technology" can vary. For example, in the case of select agents, "technology" includes information about disposal of the materials under ECCN 1E351. Technology and software that are not subject to the EAR would be excluded from export regulation, such as publicly available technology.

Supercomputers
A common deemed export question relates to access by persons in the UMA community to supercomputers (designated by their adjusted peak performance or APP under Category 4 of the CCL). This is an example where mere access to or operation of a supercomputer does not constitute a deemed export. Faculty and technicians involved in the procurement, development or operation of such supercomputers are responsible for their proper management and supervision and should know what restrictions apply.

Encryption Software and Technology
Faculty and students who work with encryption software and technology have a particularly complex compliance framework to maneuver within. As referenced above, encryption software (as well as associated technology) with symmetric key length exceeding 64 bits generally do not satisfy the exclusions on which universities ordinarily rely, including the educational information exclusion or the publicly available or public domain exclusion. However, there are recognized Department of Commerce clarifications and specific license exceptions that do apply.

As part of the Federal government policy efforts to promote data security through encryption protections imbedded in mass market software and hardware products, it is permissible, while in the U.S. for non-U.S. persons to use any type of mass market encryption software products (covered under 5D992) and encryption hardware covered under 5A002 and 5B002. The Department of Commerce makes this clear in its policy statements. See, for example, the Department of Commerce's BIS encryption export policy located at http://www.bis.doc.gov/encryption/encfaqs6_17_02.html and the BIS guidance in Questions 17 of the following FAQs: http://www.bis.doc.gov/deemedexports/deemedexportsfaqs.html#17

Also, under License Exception ENC, non-U.S. persons who are employees, contractors or interns employed at UMA facilities can use encryption software (covered by ECCNs 5D002 and 5D992) with no license or prior government review required. This includes work developing or producing new products. 15 CFR 740.17(a)(2). In addition, special exemptions apply to certain kinds of encrypted medical end-use software and to temporary physical exports of tools of trade.

With respect to the physical shipments of software, under the EAR License Exception TSU, encryption source code or object code (covered by 5D002) may be exported without a license except to Iran, Cuba, North Korea, Syria or Sudan. 15 CFR 740.13. However, determining the applicability of the TSU exception is complex and you should contact OVCRE for help with the analysis.

Special exemptions apply to teaching encryption techniques. Encryption technology that is publicly available, including technology covered by ECCNs 5E002 and 5E992, are not subject to the EAR. Therefore, publicly known encryption techniques, algorithms and schemes may be shared and taught to non-U.S. persons within the U.S. (sharing of encryption software is a separate analysis). 15 CFR 734.3(b)(3). However, providing encryption technology controlled under 5E002 to students may require a license if it is provided with the specific intent to aid in the development of commodities or software controlled under 5A002 or 5D002. See License Requirement Note to ECCN 5E002.

Restricted Party Screening Lists
Various U.S. Government agencies maintain a number of lists of individuals or entities barred or otherwise restricted from entering into certain types of export, trade and financial transactions with U.S. persons. All activities must be screened using these lists to ensure that UMA does not engage in a transaction with a barred entity or person.

> **EAR Denied Persons List**. These are individuals and entities that have had their export privileges revoked or suspended by BIS. The list is at http://www.bis.doc.gov/dpl/Default.shtm

> **EAR Entity List**. These are entities identified as being involved in proliferation of missile technology, weapons of mass destruction, and related technologies. The Entity List is at http://www.bis.doc.gov/Entities/Default.htm.

Specially Designated Nationals and Blocked Persons List (SDN List). Maintained by OFAC, this is a list of barred terrorists, drug traffickers, and persons and entities associated with embargoed regimes. Generally, all transactions with such persons are barred. The list is at http://www.treasury.gov/resource-center/sanctions/SDN-List/Pages/default.aspx

List of Debarred Parties (Excluded Parties List System). The Department of State bars certain persons and entities from engaging in the export or re-export of items subject to the USML. The list is at https://www.epls.gov.

Unverified List. These are foreign persons and entities for which Department of Commerce has been unable to verify the nature of their operations. While transactions with these entities are not barred, special due diligence is required. It is available at
http://www.bis.doc.gov/Enforcement/UnverifiedList/unverifiedparties.html

Persons Named in General Orders (Part 736, Supp. No. 1). General Order No. 2 contains the provisions of the U.S. embargo on Syria and related matters. A link to the General Orders is available at http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=ff1202a942a0e6ce7d49a2d57dbeaf77&rgn=div5&view=text&node=15:2.1.3.4.23&idno=15#15:2.1.3.4.23.0.1.3.25

Excluded Parties List. These are entities that have been barred from contracting with U.S. Government agencies. In general, entities cannot contract with such parties in fulfilling a U.S. Government contract, either as prime or sub-contractor. The EPLS is available at http://www.epls.gov

Nonproliferation Sanctions maintained by the Department of State. These lists are available at http://www.state.gov/t/isn/c15231.htm

Supplier Classification of Items
When, in the course of research activities, UMA receives materials from a sponsor and the PI cannot determine whether export controls apply, the ORC will contact the sponsor for export jurisdiction and classification information. If necessary, the sponsoring company is asked to complete a Supplier Classification Request Form to identify the types of materials involved and whether anything is export controlled.

Immigration Sponsor Letters
For Principal Investigators who want to issue a sponsor letter on behalf of a foreign person from Country Groups D or E, the letter or an email request must be forwarded to the ORC for vetting and approval. The high risk disciplines for UMA are: Engineering, Physics, Astronomy, Polymer Science, Computer Science and Research with Lasers, Research with Encrypted Software, and Research with Controlled Chemicals, Biological Agents and Toxins The list of country groups are located in Suppl. 1 to Part 740 which can be found at the EAR regulations database at: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=5875d1d3828eadec5b700c3f72180bd1&rgn=div5&view=text&node=15:2.1.3.4.25&idno=15 The letter should be accompanied by the foreign person's resume and a

copy of his/her recent publication abstracts. The PI is responsible to document activities of all sponsored foreign visitors and be able to provide records to verify such activities upon request.

International Travel

When traveling abroad, UMA researchers should be familiar with the impact of export control regulations. Researchers need to make sure that any information discussed or items taken out of the U.S. are either not controlled, or if controlled, the proper licenses are in place. Researchers, as individuals, and UMA can be held liable for improperly transferring controlled technology. Thus, it is important to review and understand the federal requirements. Prior to discussing technology or making a presentation when traveling, verify that the technology, information, and/or commodity qualifies for an exclusion. Please note that the exclusions do not apply when controlled equipment or biological samples are hand-carried or shipped abroad. Biological samples should never be transferred without prior authorization.

Be aware that more than one license may be required for some travel. For example, travel to an OFAC embargoed country would require a license issued by the Treasury Department. An EAR license may be required as well depending on whether an export of controlled technology (information) is anticipated.

Exclusions that are relevant for researchers when traveling include:
- Published Information and Software – information that is generally accessible to the public through publication in books or periodicals, or information presented in the United States at a conference, meeting, seminar, trade show or other open gathering (members of the general public are eligible to attend and attendees are permitted to take notes) is considered to be in the public domain. Software available from a web site and accessible to the public is also considered to be publicly available. (Encryption software with symmetric key length exceeding 64 bits does not meet this exclusion.)
- Educational Information – Course material taught in U.S. universities in course catalog classes and information that is in the public domain fall within the educational information exception. (Encryption software with symmetric key length exceeding 64 bits does not meet this exclusion.)

Guidance for international travel is posted on the U.S. State Department website at http://travel.state.gov/travel/cis_pa_tw/cis_pa_tw_1168.html

The Federal Bureau of Investigation also publishes a travel advisory for faculty which can be viewed at http://oip.mines.edu/forms/fac%20advise.pdf

OFAC publishes travel guidelines for securing licenses for travel to embargoed countries. A useful guide for understanding the OFAC sanctions against Cuba is located at: http://www.treasury.gov/resource-center/sanctions/Programs/Documents/cuba.pdf   Travel guidelines for travel to Cuba are available at http://travel.state.gov/travel/cis_pa_tw/cis/cis_1097.html OFAC also provides lists of approved companies to arrange for travel licenses and flights to embargoed countries.

Authorized providers for travel to Cuba are available at http://www.treasury.gov/resource-center/sanctions/Programs/Documents/cuba_tsp.pdf

Special care should be taken of computers that contain non-commercial, special purpose or certain encryption software. These items could be subject to seizure or customs duties and could pose a threat if stolen. See discussion above under "Encryption Technology." If you need to travel with such items, an export review should be performed and if necessary, a license obtained prior to travel, and it should be completed well ahead of expected travel dates. Before initiating travel, the following questions should be considered to evaluate whether export regulations apply:

1) Do you plan to take any information or technology that is controlled?
2) Do you plan to travel to an embargoed destination?
3) Are you taking any biological materials? Identify the material(s).
4) Are you taking any equipment with you other than those identified as Tools of the Trade under the export regulations?

If the answer to any of these questions is 'yes', contact the ORC to determine how to proceed.

Export Control Checklist
The Export Control Checklist is used by PIs to self-identify a proposed project that may involve exports and is therefore subject to export control regulations. Researchers need to be aware of potential export control issues so they can recognize and bring it to the attention of the appropriate individuals at UMA. It is critical for the researcher to provide input in the technical evaluation as they have control over the scope of the research project and understand the technology at issue. The checklist is used by ORC and OGCA to analyze whether export controls apply to a particular project.

Technology Control Plans
The purpose of a Technology Control Plan (TCP) is to outline procedures used by UMA for the protection of information and material identified under applicable federal directives governing the export of critical technology that may be received or developed in the course of performance of activities that are subject to export controls. Technology Control Plans must be developed and submitted for review and approval for any research that involves export controlled items, technology or data. The purpose is to identify authorized personnel and develop a physical and IT security plan to protect and control research information from access by unauthorized persons. Once the TCP is in effect, no personnel can be added to that project or facility without the prior approval of ORC. The development of the TCP is a mandatory precursor to an application for a deemed export license or technical assistance agreement. The TCP will also establish what controls will continue upon completion of the project. Once a PI has a TCP in place for his/her office or laboratory, all immigration sponsor letters and all foreign visitors invited by that PI must be screened by the ORC. TCPs are necessary only in circumstances where special approval for restricted research has been granted by the VCRE.

Identification, Receipt and Tracking of ITAR Controlled Items
A TCP is also required as a means for tracking and monitoring compliance when projects involving ITAR controlled items, including technical data, are identified. The Director of Research Compliance is responsible for oversight and licensing, including technical assistance agreements, of all projects in which defense articles are manufactured. This would include projects involving chemical or biological agents covered under USML Category XIV. Any such TCP for ITAR controlled items MUST bar access by all foreign persons, as there is no country-by-country analysis as in the EAR regulatory framework.

Screening the Customer and Restricted/Prohibited Exports and Transfers
As an educational and research institution, there may be numerous types of customers that may require screening. For example, sponsors, vendors, visitors and end users are screened depending on the nature of the activity. Attus Watchdog Pro is the software used for screening against all lists of proscribed countries and entities.

Before new sponsors are accepted into the sponsor PeopleSoft database, proposed sponsors are screened with the ATTUS Watchdog Pro system which checks against the lists of proscribed countries and ineligible parties. The sponsor list is screened each calendar quarter to ensure sponsors remain eligible for transactions.

International students, faculty and visitors must report to the International Programs Office (IPO) upon arrival at UMA. IPO must request that the student present original visa and passport documents and make copies for the student's record and must process the visitor through the Department of Homeland Security's SEVIS database. UMA assumes that students holding valid U.S. visas have been cleared by the U.S. Citizenship and Immigration Services (USCIS).

Visiting scholars from foreign countries are provided sponsor letters to support their visa application. Proposed visitors from Country Group D and E countries and visitors to departments within the high risk disciplines are screened by ORC before issuance of the sponsor letters.

For all physical exports, end users are identified and screened to evaluate whether a license is required or any exceptions may apply.

Large Equipment Purchases
In the procurement process, the Purchasing Department asks the vendor to provide the ECCN or USML category, if known, for equipment purchases above $75,000. This information, if received, is communicated to the PI or manager initiating the procurement for record-keeping and ensuring appropriate use and control of the purchased equipment.

Activities with Persons or Entities in OFAC Countries (e.g., Cuba, Iran, Sudan, North Korea)
License exceptions and exclusions are critical for academia in the special case of considering an activity with persons or universities located in an OFAC country. Given the adversarial nature of the United States' relationships with these countries, sweeping prohibitions apply and the

attendant penalties and fines are severe. For any proposed transaction, both the export control and the OFAC requirements must be separately analyzed and considered.

OFAC and Trade Sanction Laws
There are a handful of countries commonly referred to as "OFAC countries" or "embargoed countries." The most widely known are Cuba, Iran, Sudan, Syria and North Korea. Very strict trade sanctions apply to these countries under regulations issued and administered by the Office of Foreign Assets Control (OFAC) within the Department of Treasury.

Interactions with persons and organizations located in these OFAC countries come with a great degree of risk and require careful analysis. Some of the sanctions apply to the import of goods and services from OFAC countries as well. Detailed country-by-country information about these trade sanctions is available on the OFAC website at: http://www.treasury.gov/resource-center/sanctions/Pages/default.aspx

The analysis of whether a proposed activity would be allowed must be made at the outset since, in the absence of an exception or exclusion, an OFAC license MUST be secured from the Treasury Department before initiating any transactions or dealings with those persons (including negotiations for a proposed activity). Only a handful of license exceptions and general licenses are available. Special licenses are seldom issued because there is a general policy of denial of license requests. Further, it takes many months to receive a determination.

Cuba, Iran and Sudan
Comprehensive sanctions are in place against Cuba, Iran and Sudan. Three exceptions which are helpful for researchers do apply. First, activities which are incident to publishing of research articles are permitted with persons in Cuba, Iran or Sudan and the academic and research institutions which employ them (but no other segment of the Government or other entities). 31 C.F.R. § 515.577 (Cuba), 31 C.F.R. § 560.538 (Iran), 31 C.F.R. § 538.529 (Sudan).

Second, the export of information available in the mass market and which are fully created and in existence as of the date of the transaction, such as published research articles, may also be exported. 31 C.F.R. § 515.206(a)(2) (Cuba), 31 C.F.R. § 560.210(c)(2) (Iran), 31 C.F.R. § 538.212(c)(2) (Sudan).

Third, some exceptions apply to travel. Travel to Iran and Sudan is generally permitted, including payments for expenses ordinarily incident to such travel, including living expenses and buying goods or services for personal use. However, the project proposed to be undertaken while in the country may require a license.

Travel to Cuba remains highly regulated (other than the rules for travel to visit family in Cuba which were modified in 2009). A couple general licenses are available. One allows travel to Cuba to attend international conferences that are regularly held in other countries. 31 C.F.R. § 515.564(a)(2). Detailed guidelines for travel to Cuba are available at: http://www.treasury.gov/resource-center/sanctions/Programs/Pages/cuba.aspx   OFAC also provides lists of approved companies to arrange for travel licenses and flights to embargoed countries. Authorized providers for travel to Cuba are available at

http://www.treasury.gov/services/Documents/cuba_tsp.pdf Another OFAC general license allows full-time professionals to travel to Cuba for professional research. 31 C.F.R. § 515.564(a)(1).

Syria, North Korea and Other OFAC Countries
The trade sanctions against Syria and North Korea are more narrow in scope (however, as discussed below, they are treated as embargoed countries for export control purposes). Other countries subject to lesser OFAC trade sanctions include: Belarus, Burma (Myanmar) and Zimbabwe. The sanction programs are described on OFAC's website at:
http://www.treasury.gov/resource-center/sanctions/Pages/default.aspx

Travel with Laptops and GPS Devices
Please be aware that a Department of Commerce license is needed in order to travel with a laptop or any GPS device to an OFAC country.

Students and Researchers in the United States
Different rules apply to participation of students and researchers from OFAC countries in educational or research activities in the United States. Universities may enroll or employ persons who are citizens of Cuba, Iran or Sudan if they are permanent residents (green card holders) or are present in U.S. under a valid visa. (However, some country specific restrictions on payments may still apply.) These matters are administered by the campus International Programs Office which is charged with monitoring the activities of these persons while in the United States and reporting their activities to the Department of Homeland Security. Careful supervision of these persons is required to avoid a "deemed export" under the Department of Commerce (EAR) regulations or Department of State (ITAR) regulations. However, ordinary license exceptions and exclusions apply to their activities within the United States, such as the fundamental research exclusion.

Export Control Laws and Activities with Persons in Embargoed Countries (e.g., Cuba, Iran, Sudan, Syria, North Korea)
Under the EAR regulations of the Department of Commerce, effectively, all items used in commerce which have a potential dual-use are covered at the very least under a catch-all classification referred to as "EAR 99." EAR 99 items require a license for export to a person or entity in all Department of Commerce embargoed countries. These countries include Cuba, Iran, Sudan, Syria and North Korea. In other words, your working assumption should be that all shipments or travel with goods requires a license to an OFAC embargoed country. (Although, a handful of country-specific license exceptions apply under Part 746 of the EAR. 15 C.F.R. 746.) Severe fines and penalties apply to export violations.

However, this entire framework applies only if the items are "subject to the EAR" in the first place. Many exceptions and exclusions apply which are enumerated in the EAR regulations at 15 C.F.R. 734.3. For example, publicly available technology, technology that arises from fundamental research, or information subject to the educational exclusion are NOT subject to the EAR.

Here is a helpful FAQ from the Department of Commerce 15 C.F.R. 734, Suppl. 1:

"Question D(6): I would like to correspond and share research results with an Iranian expert in my field, which deals with technology that requires a license to all destinations except Canada. Do I need a license to do so?

Answer: Not as long as we are still talking about information that arose during or resulted from research that qualifies as "fundamental" under the rules spelled out in § 734.8(a) of this part."

Recall, however, from the discussion under "OFAC and Trade Sanction Laws" above that no research contract can be entered into (nor can negotiations be initiated) with this researcher in Iran or his employer without an OFAC license.

Compliance with Department of State ITAR export control regulations is more straightforward because its applicability is rare.   ITAR regulations apply only to items (and related technical data) that are specifically designed, developed, configured, adapted or modified for military applications. This kind of technical data would most likely arise from a contract or subcontract with a United States national security agency.   The Department of State has its own separate list of embargoed countries set out at ITAR § 126.1. More information is available at the following website: http://www.pmddtc.state.gov/embargoed_countries/index.html

In summary, undertaking activities with persons in an OFAC embargoed country (such as Cuba, Iran, Sudan, Syria or North Korea) is fraught with risk and requires extreme care and planning from the outset.

LICENSING INFORMATION

No matter how 'benign' an item may appear, it still may require a license to export or release to foreign nations. License requirements apply particularly to items controlled by multilateral export control regimes. In addition, some destinations and persons (individuals or groups) are subject to comprehensive export controls, including controls on all manner of consumer products that do not appear on the CCL or USML.

A license may also be needed to "re-export" an item that was produced or originated in the United States. A "re-export" is the shipment or transmission of an item subject to the EAR from one foreign country to another foreign country. A re-export also occurs when there is "release" of technology or software (source code) that is subject to the EAR in one foreign country to a national of another foreign country.

The Commerce Department is responsible for licensing dual use items. The regulations on the export of goods and related technology are identified on the Commodity Control List (CCL), Title 15 CFR 774, Supplement 1. (The State Department is responsible for licensing items with military applications.)

The following general questions can be used to help determine whether an activity may require a license:

1) Is the person a U.S. Citizen or permanent resident (issued a green card)?
2) Is the information already published (for example on the Internet or in public libraries)?
3) Is it educational information covered in a course catalog course?
4) Is the technology disclosed in a published patent application or an issued patent?
5) Is the research considered fundamental research that will be published?
6) What is the jurisdiction and classification of the product – is it EAR 99, or something else?
7) Does a license exclusion or exemption apply?
8) If none of the above apply, a license may be required.

If an activity is controlled under the export regulations, then a license or other approval is needed from the respective oversight agency unless an exemption or exception applies. Examples of situations where a license may be required include:

- research that involves defense, military, weapons, or space technologies
- export of a commodity or good outside of the U.S.
- attending a conference where registration is limited to U.S. citizens
- attending a conference outside of the United States
- activities where export control exceptions do not apply
- transfer of technical data about a controlled technology to a foreign national in or outside of the U.S.
- providing anything of value to someone from a sanctioned country, on the entity list, denied persons list, debarred (or excluded) parties list or any other restricted list.

When exclusions or exceptions do **not** apply (or if the transaction involves dealings with a sanctioned entity or country), then a license must be obtained for any deemed export, export, or re-export **prior** to the transfer of any information.

The following information is then needed to determine whether the U.S. origin product requires a license:

 1. *Export Control Classification Number (ECCN).* Certain items, notably those controlled by multilateral export control regimes, are on the Commerce Control List (CCL) (part 774 of the EAR) and are included under a specific ECCN. The ECCN in the CCL will also tell you the reason(s) for control. An item can be 'self-classified' with justification or BIS can also assist with classification when necessary. Contact the OVCRE for assistance. Items not listed on the CCL are designated as EAR99 items and generally can be exported without a license, unless the export is to an embargoed country, or to a prohibited person or end-use.

 2. *The ultimate destination of the item.* The reason(s) for control listed in ECCNs on the CCL (part 774 of the EAR) needs to be matched with the country of ultimate destination in the Country Chart (part 738 of the EAR). The reason(s) for control, when used in conjunction with the Country Chart, will help to determine if a license is required to the ultimate destination. If it is determined that your export transaction requires a license, review the EAR to determine if any License Exceptions are available (part 740 of the EAR).

 3. *The end-user and end-use for the item.* Even if determined that a license is not required based on the ultimate destination (or a license is required but a License Exception would generally apply), a license may be required because of the specific end-use or end-user. These are referred to under the regulations as the "General Prohibitions" and are found at Part 736 of the EAR. There are certain special restrictions that apply to persons (or entities) identified in the EAR, as well as to persons who are involved in weapons proliferation activities. In most instances, a license is required to persons identified in part 744 of the EAR for the export or re-export of all items subject to the EAR (i.e., all items on the CCL and all items classified as EAR99). There are certain end-uses that are prohibited. An end-user certification form may need to be completed by the end user to assist in the determination process.

The ORC is the UMA office authorized and resgistered to submit jurisdiction and classification requests as well as license applications to the Department of Commerce and Department of State. ORC will consult with Environmental Health and Safety with respect to any TCPs or license applications involving controlled chemicals or biological materials.

ROLES AND RESPONSIBILITIES

In a University setting, it is necessary to coordinate export controls between departments as well as between academic and administrative functions of the institution so the program may be integrated fully across all levels of the institution. The processes should be clearly outlined so each department understands their responsibilities, information is forwarded to the appropriate party, and the necessary checks are completed and supporting documentation is on file. The UMA reporting structure is provided below for those areas involved in export control compliance and for scenarios expected to occur at UMA. Specific procedures for each department are outlined in a separate document titled the "Export Control Compliance Program Standard Operating Procedures," which is developed through the OCECC's Implementation Committee comprising representatives from the relevant campus departments.

Institutional Commitment to Compliance Oversight

Compliance is a matter for top management attention and needs adequate resources for full implementation. The Oversight Committee on Export Control Compliance (OCECC) is charged with development and oversight of the UMA export control compliance program. The Committee's purpose is to also ensure that UMA has the resources in place to assure compliance with export control and trade sanctions laws and regulations. The members of the Oversight Committee are knowledgeable about the EAR, Arms Export Control Act (AECA), ITAR and OFAC laws and regulations. As the leaders of each of their respective offices and functions, they oversee the implementation of the export control compliance program, these guidelines and the operating procedures in their respective departments and offices.

The Oversight Committee on Export Control Compliance (OCECC) consists of the Provost and Senior Vice Chancellor for Academic Affairs, the Vice Chancellor for Research and Engagement (VCRE), the Vice Chancellor for Administration and Finance (VCAF), and the Chief Information Office (CIO). This committee is responsible for implementation and oversight of export control matters, including monitoring the effectiveness of these guidelines and, through its Implementation Committee, overseeing the Export Control Compliance Program Standard Operating Procedures.

The Office of the Vice Chancellor for Research & Engagement (VCRE) provides oversight, coordination and administration of export control compliance programs through its Office of Research Compliance. This office also works with the academic affairs and administration and finance areas and deans to ensure compliance. Announcements are issued from the OCECC and are also posted on the ORC's website at http://www.umass.edu/research/export-control. The Vice Chancellor for Research & Engagement is designated as the empowered official for export license applications and approves acceptance of any project that involves export restrictions.

The Office of Research Compliance (ORC) is the central office with primary responsibility for research compliance functions, including export control compliance, and is responsible for coordinating the implementation of the export compliance program. ORC staff work with Amherst campus faculty, staff and students to:

- meet export control regulations;

- communicate about changes in regulations;

- offer training and coordinate outside export assistance;

- maintain relevant records for all export control training and other export activities; and

- provide support for license applications.

ORC conducts outreach, education, training and advising of members of the UMA community to help ensure export control compliance. The Director of Research Compliance is an empowered official for export license applications, and is responsible for facilitating the annual review and update of the UMA Export Control Guidelines and the Export Control Compliance Program Standard Operating Procedures (SOPs), conducting periodic audits, and assisting with determination of ECCNs. The University's Office of the General Counsel (OGC) is available for assistance with export control compliance, and any necessary input from OGC is coordinated through ORC.

The Office of Grant and Contract Administration (OGCA) vets proposed projects, including Sponsored Research Agreements and Research Services Agreements, with the PI and proposed sponsors to analyze the applicability of export regulations to the proposed activities and coordinates with ORC to address requirements. ORC is responsible for screening proposed activities with potentially proscribed countries or ineligible parties, monitoring compliance with TCPs, and screening international travel and visits by foreign nationals. The ORC maintains copies of all export control documents including license applications, policies, forms and guidelines, memoranda, notes, screens, correspondence, contracts, invoices and other financial records related to export controls, shipping documents, and other records submitted to ORC for vetting and approval.

Office of Grant and Contract Administration (OGCA) is responsible for all extramural proposal submissions, accepts and administers grant awards, and negotiates contracts and other research-related agreements on behalf of the University. It reports to the Vice Chancellor for Research & Engagement. The OGCA reviews all Requests for Proposals (RFPs) and research contracts for terms or provisions that might restrict access to or publication of research and technical data, set limits on personnel, or otherwise render inapplicable the exclusion for fundamental research or publicly available information. For the same reason, OGCA also examines the nature of the work to determine whether it relies on use of third-party trade secrets or proprietary information that would prevent publication of the research results. UMA policy on the free dissemination of research results prohibits the acceptance of contracts or grants with publication or dissemination restrictions.

Any proposed contract, grant, or award found by OGCA to contain these restrictions is referred to ORC for further analysis for export control implications. ORC will work with the PI, OGCA and the sponsor to attempt to negotiate restrictions out. PIs are asked to complete an export control review form or checklist to assist in making an export control assessment. If the restrictions cannot be negotiated out, it is the responsibility of the Vice Chancellor for Research & Engagement to consider whether there is a means for

accepting the contract and its potential impact on dissemination of the resulting research results and academic progress of students.

All proposed research projects with foreign sponsors or in foreign countries which otherwise require physical exports are referred to ORC for the same analysis, review and approval, as well as for end user screens and licenses. ORC also reviews of the terms and conditions of awards from foreign sponsors for any "anti-boycott" language that might be included.

Research Services Agreements in many instances do not meet the fundamental research exclusion because they are typically specific projects conducted for companies with no intent to publish the results. Many of these projects, however, rely on the use of publicly available techniques and processes that are not export controlled. Research service agreements are submitted to OGCA with a statement of work and a purchase order. If there is any question as to the nature of the work and whether it is export controlled, OGCA works with ORC to review.

Before new sponsors are accepted into the OGCA database, sponsors are screened with against the lists of proscribed countries and ineligible parties, using ATTUS Watchdog Pro. This same process is used each calendar quarter to screen the entire list of sponsors using ATTUS Watchdog Pro.

Environmental Health and Safety (EHS) is under the direction of the VCAF. EHS has a robust and comprehensive laboratory safety and compliance program. EHS maintains a database of faculty and staff that work with biological agents, chemicals and other hazardous materials. EHS conducts periodic training of persons with access to laboratories about the proper handling, disposal, security and shipping of these materials, including export control awareness training. Chemicals and biological agents are subject to many legal requirements which must be complied with. In fact, most of these materials are classified as dual use under the CCL. As a result, shipping training and other training sessions include discussion of export controls. EHS is available to assist members of the UMA community to comply with these laws and regulations.

Institutional Biosafety Committee (IBC) is a review body that oversees activities involving laboratory use of potentially hazardous biological agents. UMA is committed to ensuring the safe handling, storage and disposal of potentially harmful biohazardous materials for research or instructional projects. The Compliance Coordinator in the Office of Research Compliance oversees and coordinates the work of the IBC. Many of these materials are classified as dual use under the CCL and IBC training includes information about export controls.

Human Resources is under the direction of the VCAF. Human Resources is authorized to work with ORC and to provide citizenship and nationality information when needed to authorize personnel to work on projects. ORC and OGCA are authorized to have access to HR personnel files to support applications for security clearances.

International Programs Office (IPO) is under the direction of the Provost and is responsible for advising the campus on compliance with immigration regulations for students, exchange

visitors, and foreign national visiting faculty and staff. IPO is responsible for processing immigration sponsor letters for proposed foreign visitors to departments.

Purchasing/Accounts Payable is under the direction of the VCAF and is responsible for ensuring that vendors are screened and approved before being entered into the system that allows purchases to be made. The Purchasing Department also secures letters of engagement for all freight forwarders and tracks the ECCNs of large equipment purchases. They consult with ORC if there are any unusual export control provisions or other "red flags" in any equipment purchase or lease agreement.

Travel is under the direction of the VCAF and is responsible for reviewing and ensuring compliance for all domestic and international travel. Faculty and staff are encouraged to seek the input of the Travel office, especially when planning international travel.

Information Technology is under the direction of the VCAF and provides information services and technology support for all UMA employees and students, including computing services, connectivity and information security. Information Technology oversees all data security, electronic mail and computer policies and helps ORC to develop and implement Technology Control Plans. In addition, it is responsible for developing and maintaining an effective information technology security plan for UMA.

Campus Police the Compliance Oversight Committee consults with campus police and, as needed, engages the campus police in any investigation it may undertake regarding a possible violation or suspected security breach or theft.

Commercial Ventures and Intellectual Property (CVIP) is under the direction of the VCRE and is responsible for assisting in review of invention disclosures and determining the applicability of its transfer to commercial applications, as well as reviewing, under protection of non-disclosure agreements, third party proprietary technologies. To prevent deemed exports, no foreign persons or foreign nationals shall be employed or work as students or interns in CVIP. From time to time, CVIP receives a request to handle a materials transfer agreement for receipt or transfer of materials to a foreign person, as well as confidentiality agreements with non-standard export control provisions or having other "red flags". CVIP refers these requests to ORC for export control review and approval.

Deans; Center Directors and Department Heads provide oversight of their respective departments and research centers to ensure compliance. They assist the ORC and the Provost in implementing the UMA export compliance program. They play a critical role in supporting, facilitating, and coordinating faculty and staff training. They play a critical role in assessing the appropriateness of sponsoring a foreign visiting scholar or other foreign visitor in their departments and centers, and approving foreign travel requests.

Principal Investigators have the best understanding of their research and play the primary role in developing and directing all research projects. Therefore, PIs have the best information as to whether the particular technology, data, or information involved in that research is or may be covered by export control regulations. PIs also make decisions regarding equipment or technology and to whom it is transferred. Because there is a high penalty for non-compliance

with export control regulations, it is critical for PIs to understand these regulations and work with the administrative staff in the ORC and OGCA to evaluate technical aspects of export controlled items, technology, or data.

The PI is responsible for the following:

- Reviewing UMA information on export regulations provided on the ORC website
- Participating in training and identifying staff and students to attend training
- Determining whether there may be any export control issues to address before submitting a proposal or beginning any research
- Communicating with the OCECC and implementing departments if any export control issues are identified or if any questions arise about export regulations
- Cooperating with ORC in developing Technology Control Plans (TCPs) and applying for licenses and following the TCP to ensure compliance with all applicable restrictions
- Adhering strictly to any applicable restrictions and coopering fully with UMA's efforts to monitor compliance when export control regulations apply
- Notifying the ORC as soon as any change is necessary for work on a controlled project, such as a change in the scope of work or the addition of new staff
- When conducting outside consulting activities, export control compliance is the responsibility of the PI

Administrative Assistants and Business Managers provide assistance to many departments and faculty throughout UMA. There is an emphasis on training of Administrative Assistants due to the importance of their role in assisting faculty to meet compliance procedures. They are typically involved with activities such as international travel authorization forms, shipments, purchasing, hiring documentation, and maintaining ProCard logs.

EXPORT ADMINISTRATION ORGANIZATION CHART

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                        ┌─────────────────┐
                        │   Chancellor    │
                        └─────────────────┘
                                 ┊
  Oversight Committee on Export Control Compliance (OCECC)

┌──────────────┐  ┌──────────────┐  ┌──────────────┐  ┌──────────────┐
│   Provost    │  │Vice Chancellor│  │Vice Chancellor│  │    Chief     │
│ & Senior Vice│  │ for Research &│  │     for      │  │ Information  │
│Chancellor for│  │  Engagement   │  │Administration│  │   Officer    │
│  Academic    │  │   (Chair)     │  │      &       │  │              │
│   Affairs    │  │               │  │   Finance    │  │              │
└──────────────┘  └──────────────┘  └──────────────┘  └──────────────┘
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Implementation Committee for Export Control Compliance (ICECC)

Director, ORC (Chair)	Director, OGCA
Controller	Director of Procurement
Dean, Graduate School	Director, International Programs Office
Information Security Officer	Director, Commercial Ventures-Intellectual Property
Vice Provost for Academic Personnel & Dean of the Faculty	
Assistant Vice Chancellor for Human Resources	
Assistant Director, Environmental Health & Safety	
Compliance Coordinator, Office of Research Affairs	

Deans, Department Heads and Center Directors	Office of Research Compliance (ORC)	Controller	Office of Information Technology (OIT)
International Programs Office (IPO)	Office of Grants and Contracts (OGCA)	Procurement	
Graduate School	Commercial Ventures Intellectual Property (CVIP)	Human Resources	
Faculty		Travel	
		Environmental Health & Safety	

RECORD KEEPING

UMA must comply with the various record keeping requirements of the EAR and ITAR and related laws and regulations. This is generally (and preferably) done by providing documents to the ORC, but in some instances includes keeping documents locally and providing copies to ORC. For example, the International Programs Office maintains all SEVIS program records, Procurement maintains all records of vendor screens, etc. The export control records that are retained and secured include any licenses, license applications, policies, manuals, forms and guidelines, memoranda, notes, correspondence, screens, contracts, invoices and other financial records, shipping documents including bills of lading and Shipper's Export Declarations and Automated Export System (AES) records, records submitted to ORC for vetting including exclusion and exemption analyses, certificates, audit/review check sheets and reports, and the export control clearance form. Training records are also retained by ORC and include sign-in sheets signed by persons attending, date and location of training, speakers, and the subjects covered. Records are maintained for a period of five years from the expiration date of the authorization or date an exemption is claimed. Thereafter, the records shall be discarded consistent with the UMA record retention policy.

AUDITS AND REVIEW OF COMPLIANCE PROGRAM

Audits are designed to systematically review and monitor the effectiveness of the UMA export control compliance program and ensure compliance with export control laws. Audits will be conducted by the OCECC on an annual basis and on an ad hoc basis as needed.

Audit objectives related to export controls include but are not limited to the following:
- Understanding and assessing the adequacy of management policies designed to comply with all U.S. export control laws and regulations
- Documenting and evaluating controls implemented to ensure compliance with policies
- Through testing, determine the effectiveness of these Guidelines and the controls in place and, if necessary, recommend revisions to improve the effectiveness
- Monitor compliance of research projects and departments with export license requirements, technology control plans and these compliance guidelines
- Identify possible violations

The ORC, as the lead department coordinating compliance, will evaluate and report to the UMA OCECC on an annual basis on the results of its audits and the effectiveness of the export control compliance program. This process is used to identify needed modifications to the Guidelines and the SOPs to correct weaknesses identified in the compliance program. Based on this report, the Oversight Committee will report to the Chancellor on an annual basis on the effectiveness of the export control compliance program.

Audits are conducted by the ORC and will include, but are not limited to:
- Verify that screen checks are being performed
- Check training logs and records
- Identify current training needs
- Verify and ensure appropriate records are in compliance
- Accuracy and conformity of export transaction documents
- Foreign national procedures are effective
- License and Technology Control Plan reviews
- Stop/hold procedures in place if problems arise
- Guidelines, procedures and forms updated to reflect any regulatory changes
- Review procedures for supervisory sign-offs, task and information management between departments, including update contact persons for roles played by different departments
- Assist departments with export control responsibilities to conduct annual internal assessments

Annual Guidelines Review
UMA Export Control Compliance Program Guidelines and Standard Operating Procedures (SOPs) will be reviewed and updated at least annually. The ORC oversees and coordinates the annual review process, with review of the revisions and updates by the Oversight Committee.

DETECTING AND REPORTING VIOLATIONS

Commitment to Reporting

An integral part of export compliance is that employees report suspected violations of export laws and these suspected violations are thoroughly investigated. It is the policy of UMA to voluntarily self-disclose violations as required. Members of the UMA community are expected to contact the OCECC should they have any questions about the application of the export control laws to their research or other activities. UMA faculty, administrators, staff and students should report any potential violations directly to the OCECC. No employee shall be punished solely on the basis that he or she reported what was reasonably believed to be an act of wrongdoing or a violation of the export control laws.

Investigation

Once an alleged violation has been reported, an investigation will be initiated after consultation with the OCECC to determine the credibility of the allegation and an appropriate response. If the allegation merits further fact finding and investigation, the Committee will work with the appropriate parties to conduct a thorough investigation. The results of its investigation are then made known to senior management to consider further action, including notification of the appropriate government agency and corrective action. All documents and records relating to any suspected violation must be immediately secured and maintained in accordance with all applicable record keeping requirements. Information Technology and Campus Police support these investigations as needed.

Government Subpoenas

In the event any subpoena or other request for documents is received from any Federal agency, immediately contact the Office of the General Counsel for appropriate and timely response. Likewise, if a Federal agency representative arrives on campus, immediately contact the Office of the General Counsel. You shall not interfere with or obstruct any Federal agent or law enforcement officer in the performance of his/her duties.
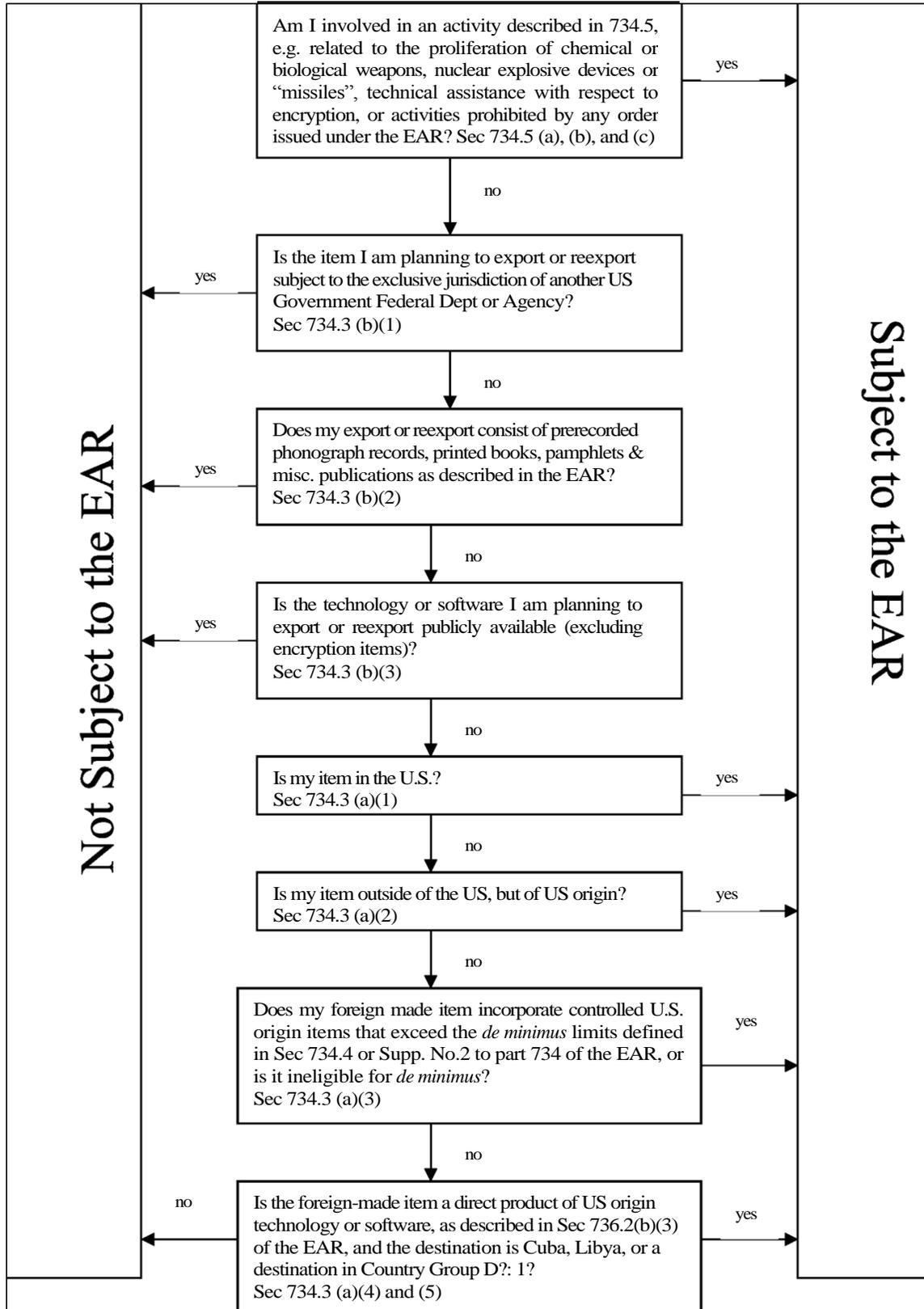
Export Control Decision Tools:

Is this Project Export Controlled?

Fundamental Research & Publicly Available Information**	Gray Area Moving from FR/PAI to Export Controlled Technology	Export Controlled Areas, Applications and Intended Use
Open Research – fundamental & applied Found in the public domain-released w/out restriction No proprietary or intellectual property considerations Not associated with an area excluded by General Prohibitions, end use and end user restrictions Intended or held out for the General Public Issued by the U.S. Government with the intent of Openly Releasable Data gathering or note taking	Author or Sponsor begin to discuss restricting dissemination Approaching or getting close to application Knowing or suspecting that the ultimate achievement of the objective will be controlled Thinking about intellectual property Preliminary optimization leading to design alternative Thinking about making the technology or information proprietary	An area identified by the U.S. Government Agency as being Export Controlled Technology/Information held out as proprietary or has intellectual property (declaration) Conveying or teaching technology, processes with the intent of transferring Know-How abroad Detailed Design that conveys Know-How Operating & Maintenance Manuals Technology Transfer-Material that helps or supports Export Control Technology
NO EXPORT CONTROL	**GRAY AREA**	**EXPORT CONTROLS APPLY**

* Note: Each technology area may use different terms/processes that needs to be taken into account. The degree of rigor is highly dependent on the criticalness of the technology under development.

**Excludes General Prohibitions & End Use/User Restrictions

Am I subject to Export Administration Regulations? (Supplement No. 2 to Part 732)

Am I involved in an activity described in 734.5, e.g. related to the proliferation of chemical or biological weapons, nuclear explosive devices or "missiles", technical assistance with respect to encryption, or activities prohibited by any order issued under the EAR? Sec 734.5 (a), (b), and (c)

yes

no

Is the item I am planning to export or reexport subject to the exclusive jurisdiction of another US Government Federal Dept or Agency? Sec 734.3 (b)(1)

yes

no

Does my export or reexport consist of prerecorded phonograph records, printed books, pamphlets & misc. publications as described in the EAR? Sec 734.3 (b)(2)

yes

no

Is the technology or software I am planning to export or reexport publicly available (excluding encryption items)? Sec 734.3 (b)(3)

yes

no

Is my item in the U.S.? Sec 734.3 (a)(1)

yes

no

Is my item outside of the US, but of US origin? Sec 734.3 (a)(2)

yes

no

Does my foreign made item incorporate controlled U.S. origin items that exceed the *de minimus* limits defined in Sec 734.4 or Supp. No.2 to part 734 of the EAR, or is it ineligible for *de minimus*? Sec 734.3 (a)(3)

yes

no

Is the foreign-made item a direct product of US origin technology or software, as described in Sec 736.2(b)(3) of the EAR, and the destination is Cuba, Libya, or a destination in Country Group D?: 1? Sec 734.3 (a)(4) and (5)

no

yes

Not Subject to the EAR

Subject to the EAR

UMA ONLINE RESOURCES http://www.umass.edu/research/export-control

Helpful Information
- U.S. Bureau of Industry and Security website http://www.bis.doc.gov/
- Export Control Guidelines
- Differences between ITAR and EAR
- Briefing on Handling of Export-Controlled Information
- Export Controlled or Embargoed Countries, Entities and Persons
- Lists of Controlled Technologies
- Export Control Violations

Training Information
- Powerpoint presentations
- Scheduled events