

GUIDANCE - Law and Science Concentration Program

1.0 OVERVIEW

The School of Law, through the Law and Science Program, offers Concentrations for students enrolled in the School of Law, which involves a substantive concentration in law and science through course work and directed research, at a high level of performance. The enrollment in the program and the award of the Concentration is noted on the student's transcript.

2.0 CONCENTRATION PROGRAM REQUIREMENTS

As part of the requirements of 90 hours of course work for students in the School of Law, course work will include six or seven courses (and a minimum of 15 hours) from the 35 elective hours available to students for all the Concentrations. The student must enter the program before the student has earned 45 semester hours in law.

Courses and hours for different specializations have specific requirements and are set forth in Sections 3.0 - 3.7.

2.1 CORE COURSE REQUIREMENTS

2.1.1. A core course or courses is required as specified in each specialization.

2.1.2. One survey course is required for all concentrations:

_____ 6319 Emerging Technologies Law

2.2 ELECTIVE COURSES

The list of electives is subject to revision by the Director.

ADMINISTRATIVE LAW 6079. 3-4 hrs. Examines the role of the administrative process in our society, formal and informal, and emphasizes the powers and procedures common to all administrative agencies and the relationships among the legislative, judicial, and executive branches in the development of public policy.

ADMIRALTY AND MARITIME LAW 6335. 3 hrs. Provides an introduction to the substantive and procedural law that governs maritime activities and relationships involved with the private and commercial operation of vessels on the navigable waters within the U.S. and oceans around the globe.

AGRICULTURAL BIOTECHNOLOGY LAW 6075. 1-3 hrs. This course examines issues of policy and law in agricultural biotechnology, including synthetic biology, genetically modified organisms, transgenic animals, foods, cloning, CRISPR, crimes, economic espionage, intellectual property and environmental laws. These issues will be considered within the context of governmental regulatory approaches as well as private sector participation. This interdisciplinary course is designed for law students who have either nonscience or science/engineering undergraduate majors.

AGRICULTURAL LAW 6254. 2 hrs. Federal and Texas laws affecting the agricultural and food industry. Impact of federal farm programs; Packer and Stockyards Act; agriculture commodities; basic agriculture financing and warehousing; soil, water, environmental, and conservation laws and regulations. Regulation of health and safety in agriculture and food industry.

CRIMES IN IP AND INFORMATION LAW 6249. 2 hrs. Explores the problems in applying traditional notions of theft and misappropriation to intellectual property and information. Coverage of the specific criminal provisions of the law relating to trade secret, copyright and trademarks will be included, as well as legal aspects of identity theft and the criminal use of computers.

CYBERSECURITY LAW AND POLICY 6082. 2-3 hrs. Cybersecurity law is a rapidly developing field and involves multiple fields of law, including national security law, intelligence law, criminal law, constitutional law, and administrative law. Cybersecurity is the regulation of the internet, electronically controlled infrastructure, and electronic communications using technological, social, and legal controls implemented by government and private entities to secure data and networks from theft and attack by foreign enemies of the state, domestic terrorists, hackers, competitors, spies and other adversaries.

EMERGING TECHNOLOGIES LAW 6319. 3 hrs. Introduces law and non-law students to emerging technologies and how law and policy frame interactions with it both domestically and globally.

ENERGY LAW 6302. 3 hrs. Explores issues related to traditional energy sources, such as coal, petroleum, natural gas, and nuclear energy, as well as non-traditional renewable energy sources.

ENERGY TAX 6259. 2 hrs. Focuses on the federal income taxation of domestic oil-and-gas operations and transactions, including exploration, development, production, and abandonment as well as operations and transactions relating to renewable energy. Students will learn the historical context and development of oil-and-gas provisions in U.S. tax law as a basis for learning the laws and regulations that apply today, as well as more recent developments relating to renewable energy.

ENERGY TRANSACTIONS 6263. 2 hrs. This course will teach students about the various types of transactions and documents used in those transactions in the oil-and-gas industry: leases, farmouts, joint-operating agreements, purchase-and-sale agreements, surface leases, assignments, etc. It will also cover transactions and documents relating to renewable energy.

ENVIRONMENTAL LAW 6327. 3 hrs. The respective roles of the federal and state governments in handling such problems as air and water pollution, agricultural pollution, use of public lands, and land-use planning. Federal and state regulatory means to safeguard the environment will be considered in detail.

GLOBAL BIOSECURITY LAW 6010. 2-3 hrs. Examines international history in biodefense law, including major treaties in biosecurity and biosafety law, the Biological Weapons Convention, and the Cartagena Protocol; biosecurity regulations and legal frameworks in other countries; international law and public health as well as regulatory approaches of the World Health Organization; and biodiplomacy and the role of Interpol in biocrimes.

HUMAN RIGHTS 6060. 2-3 hrs. Introduces the origins of the idea of human rights and the legal and political human rights movement. It covers the basic international agreements and other instruments and the customary international law of human rights as well as their implementation by international and national courts and other bodies.

INTERNATIONAL BUSINESS TRANSACTIONS 6306. 3 hrs. International globalization and communications over the Internet have made it a certainty that almost every area of the practice of law in the 21st Century will at some point touch upon international commerce. This course introduces students to the legal aspects of doing business abroad, particularly in developing countries. The topics are relevant not only for students who hope to learn to deal with problems faced by large multinational corporations investing in foreign nationals, but also for students who will work in rural areas where local merchants may be importing

crafts or specialty items for resale. Students will develop the tools necessary to assist their clients in writing international contracts, anticipating problems, and resolving conflicts that develop along the way. Some of the topics covered in the course include international contracting, international financing, choice of law and forum problems, forms of direct and indirect foreign investment, transfer of technology problems, transnational litigation, arbitration and other forms of dispute resolution, and a survey of U.S. and European antitrust laws and how these laws are impacted by international treaties and laws.

INTERNATIONAL WATER LAW AND HUMAN RIGHTS 6268. 2 hrs. This course considers the basic concepts of international law relating to the uses of freshwater resources (both surface and ground water). The course will address the exploitation, management, and conservation of domestic and transboundary water resources; consider issues of ownership, sovereignty, and rights to water; and delve into the ethics, human and environmental aspects of water. Throughout the course, the work of United Nations and other international organizations will be assessed and case studies will be incorporated into class discussions and assignments to address such topics as: availability, distribution, and scarcity of global freshwater; rights to and sovereignty over natural resources; conflict, conflict resolution, and dispute prevention; the ethics of water; human rights; water and the environment; and development, exploitation, and conservation of transboundary freshwater resources.

INTRODUCTION TO INTELLECTUAL PROPERTY 6039. 2-3 hrs. General survey of the legal protection of intellectual property, including patent, trade secret, copyright, and trademark.

JOURNAL OF BIOSECURITY, BIOSAFETY, AND BIODEFENSE LAW 7101. 1 hr. Students will edit submissions to the *Journal of Biosecurity, Biosafety, and Biodefense*.

LAND USE LAW 6341. 3 hrs. Land Use examines the basic concepts of law relating to the constitutional limitations on property ownership and its evolution. The course will address the history of nuisance, zoning, constitutional issues that arise around land management, subdivisions, urban redevelopment, affordable housing, smart growth, and limitations on the police powers authority for land use development as dictated by Fourteenth Amendment Due Process, Equal Protection, First Amendment and Fifth Amendment taking jurisprudence. Finally, the course evaluates how land use decisions affect environmental quality and impacts.

LAW AND SCIENCE LEGAL RESEARCH 6040. 1-2 hrs. Students will become familiar with both U.S. primary sources of law and international legal materials, and relevant secondary sources, focusing on topical practice materials, specialized electronic databases, and current awareness tools. Focuses on the research needs of students intending to pursue a law and science concentration.

NATIONAL SECURITY LAW 6023. 2-3 hrs. Addresses the allocation of foreign affairs powers between the state and national governments and the allocation of those powers among the three branches of the national government. Emphasizes the War Powers Act and the President's authority to project U.S. armed forces overseas without Congressional approval.

OIL AND GAS LAW I 6311. 3 hrs. A study of the law of oil and gas with emphasis on the interests that may be created in oil and gas, the rights of the landowner, provisions in the oil and gas lease, the rights of assignees, and legislation dealing with production and conservation.

OIL AND GAS LAW II 6318. 3 hrs. A study of the law of the transactions; related documentation; and the important jurisprudence, rules, regulations, and statutes that govern many facets of oil and gas exploration and conservation. This course also covers legal issues and transactions relating to the exploration, production, and marketing of petroleum worldwide. Prerequisite: LAW 6311.

OIL AND GAS LEASE NEGOTIATION 6112. 1 hr. Students will learn the basic components in an oil-and-gas lease and the respective priorities of the lessor and lessee, as well as the terminology employed to achieve those objectives. Prerequisite: D or better in LAW 6311.

PATENT LAW 6050. 2-3 hrs. Devoted to fundamentals of patent law; patentable subject matter, novelty, nonobviousness, and utility as well as content requirements for a patent application, infringement, defense, and remedies.

PUBLIC INTERNATIONAL LAW 6342. 3 hrs. An introductory course in international legal studies, with attention given to recognizing, analyzing, and solving international law problems in the areas of international military intervention, sociopolitical rights, economic development and well-being, and environmental protection. Special emphasis is focused on the sources of international law and the manner in which it is changing to meet the demands of the future.

SPACE LAW 6323. 3 hrs. Space law is the body of law that applies to space related activities. It has roots in law beginning in the 1800s to more recent analogous law of Antarctica. Domestic law, international law governing international relations, cooperative science, exploration, and commercial activities will be covered in this course.

TECHNOLOGY TRANSFER TAXATION 6232. 2 hrs. Covers the intersection of tax, exempt organizations, international business, and intellectual property. Exposes the tax consequences of creation, acquisition, exploitation, and transfer of various IP assets by and among public and private institutions and in domestic and international transactions. Prerequisite: LAW 6434.

TELECOMMUNICATIONS LAW AND POLICY 6014. 2-3 hrs. Examines the law governing telecommunications as well as policy considerations underlying that law. Topics may include, among others, regulation of the internet, broadband access, telephone, cable, and satellite.

TEXAS ADMINISTRATIVE PRACTICE 6209. 2 hrs. A study of Texas administrative practice and procedure with an examination of the powers and procedures common to Texas state agencies, the rulemaking and adjudication processes employed by those agencies, and judicial review of state agency decision-making.

TEXAS LAND TITLES 6250. 2 hrs. Contracts for sale of land; forms of deeds; descriptions; warranty and other covenants of title; escrows; recording statutes; practice in drafting; acquisition of title to land through adverse possession.

TEXAS MINERAL TITLES 6338. 3 hrs. Provides an in-depth study of oil, gas, and mineral titles in Texas, including the practical aspects of title examination and preparation of oil and gas drilling and division order opinions. The course will cover the mechanics, structure, drafting, and scope of title opinions, as well as an introduction to all of the areas of law the practitioner may encounter in examining mineral titles, such as land grants and patents, the Texas recording system, basic rules of interpreting conveyances and reservations of mineral and royalty interests, analysis of oil and gas leases of record, land descriptions, affidavits and recitals, execution, acknowledgement, and recordation of instruments, decedent's estates, material interests, liens and lis pendens, foreclosures, bankruptcies, easements, irregular owners of minerals, pooling and unitization, and adverse possession, with emphasis on the Texas Title Standards.

TRADEMARKS AND UNFAIR COMPETITION 6034. 2-3 hrs. A study of basic principles of unfair competition, focusing on state and federal trademark law. Topics include protectability, the acquisition of rights, registration, infringement, dilution, and cybersquatting.

VINEYARD AND WINERY LAW 6057. 2-3 hrs. Examines the major legal issues facing the wine industry. This includes areas of constitutional law, administrative law and regulatory systems (licensing, shipping, e-commerce, product standards, trade practices), intellectual property, land use, environmental laws, taxation, international trade, and other legal issues.

WATER LAW 6027. 2-3 hrs. A study of private law systems for allocating water among users, the public law systems of allocation, groundwater management, development of new water supplies, interstate disputes, and water pollution.

WIND AND SOLAR LAW 6056. 2-3 hrs. Wind energy is one of the renewable energies that contribute to reducing the use of fossil fuels. More than 3 per cent of Texas' energy is supplied by wind energy, and it is the fastest growing energy sector in the U.S., with Texas the leading state in megawatts produced. This emerging technology has raised new and unique legal issues and a growing legal practice area. This course will include a contextual survey of the societal effects, benefits, and science and technology of wind energy; application of property law, water law, oil and gas law, environmental law, natural resource law, energy law, tribal law, and aviation law as they apply to wind energy; the federal role in developing and regulating wind energy; state, local, and private sector regulatory roles; and global approaches to wind energy law.

3.0 CONCENTRATIONS IN LAW AND SCIENCE

Students may choose only one area for specialization for which they will be awarded a Concentration: Concentrations in Environmental Law; Intellectual Property Law; Energy Law, Biosecurity Law; Water Law and Science, Engineering and Technology Law.

3.1 ENVIRONMENTAL LAW CONCENTRATION

3.1.1. One Core Course is required:

6327 Environmental Law (3)

3.1.2. At least four of the electives must come from this list:

6079 Administrative Law (3-4)

6075 Agricultural Biotechnology Law (1-3)

6254 Agricultural Law (2)

6302 Energy Law (3)

6268 International Water Law and Human Rights (2)

6341 Land Use Law (3)

6040 Law and Science Legal Research (1-2)

6342 Public International Law (3)

6323 Space Law (3)

6209 Texas Administrative Practice (2)

6027 Water Law (2-3)

6056 Wind and Solar Law (2-3)

3.1.3. One Capstone Core Course is required:

6319 Emerging Technologies Law (3)

3.1.4 Six courses and a minimum of 15 course hours is required.

_____ Total hours

_____ Total number of courses

3.2 ENERGY LAW CONCENTRATION

3.2.1. One of these is required as a core course:

- 6302 Energy Law (3)
- 6311 Oil and Gas Law I (3)
- 6056 Wind and Solar Law (2-3)

3.2.2. At least four of the electives must come from this list:

- 6079 Administrative Law (3-4)
- 6335 Admiralty and Maritime Law (3)
- 6254 Agricultural Law (2)
- 6082 Cybersecurity Law & Policy (2-3)
- 6302 Energy Law (3)
- 6259 Energy Tax (2)
- 6263 Energy Transactions (2)
- 6327 Environmental Law (3)
- 6311 Oil and Gas Law I (3)
- 6318 Oil and Gas Law II (3)
- 6112 Oil and Gas Lease Negotiation (1)
- 6342 Public International Law (3)
- 6323 Space Law (3)
- 6209 Texas Administrative Practice (2)
- 6250 Texas Land Titles (2)
- 6338 Texas Mineral Titles (3)
- 6027 Water Law (2-3)
- 6056 Wind and Solar Law (2-3)

3.2.3. One capstone core course is required:

- 6319 Emerging Technologies Law (3)

3.2.4 Six courses and a minimum of 15 course hours is required.

_____ Total hours

_____ Total number of courses

[3.3 Reserved]

3.4 INTELLECTUAL PROPERTY CONCENTRATION

3.4.1. One Core Course is required:

6039 Introduction to Intellectual Property (2-3)

3.4.2. At least four of the electives must come from this list:

6079 Administrative Law (3-4)

6075 Agricultural Biotechnology Law (1-3)

6249 Crimes in IP and Information Law (2)

6306 International Business Transactions (3)

6040 Law and Science Legal Research (1-2)

6050 Patent Law (2-3)

6232 Technology Transfer Taxation (2)

6034 Trademarks and Unfair Competition (2-3)

3.4.3. One capstone core course is required:

6319 Emerging Technologies Law (3)

3.4.4 Six courses and a minimum of 15 course hours are required.

_____ Total hours

_____ Total number of courses

3.5 BIOSECURITY LAW CONCENTRATION

3.5.1. One core course is required:

7101 Journal of Biosecurity, Biosafety and Biodefense Law (1)

3.5.2. At least four of the electives must come from this list:

6079 Administrative Law (3-4)

6075 Agricultural Biotechnology Law (1-3)

6082 Cybersecurity Law and Policy (2-3)

6327 Environmental Law (3)

6060 Human Rights (2-3)

6306 International Business Transactions (3)

6040 Law and Science Legal Research (1-2)

6023 National Security Law (2-3)

6342 Public International Law (3)

3.5.3. One capstone core course is required:

6319 Emerging Technologies Law (3)

3.5.4 Six courses and a minimum of 15 course hours are required.

_____ Total hours

_____ Total number of courses

3.6 WATER LAW CONCENTRATION

3.6.1. One Core Course is required:

6027 Water Law (2-3)

3.6.2. At least four of the electives must come from this list:

6079 Administrative Law (3-4)

6335 Admiralty and Maritime Law (3)

6254 Agricultural Law (2)

6082 Cybersecurity Law and Policy (2-3)

6302 Energy Law (3)

6327 Environmental Law (3)

6268 International Water Law and Human Rights (2)

6341 Land Use Law (3)

6311 Oil and Gas Law I (3)

6318 Oil and Gas Law II (3)

6342 Public International Law (3)

6209 Texas Administrative Practice (2)

6057 Vineyard and Winery Law (2-3)

3.6.3. One capstone core course is required:

6319 Emerging Technologies Law (3)

3.6.4 Six courses and a minimum of 15 course hours are required.

_____ Total hours

_____ Total number of courses

3.7 CYBERSECURITY LAW CONCENTRATION

3.7.1. One core course is required:

6082 Cybersecurity Law and Policy (2-3)

3.7.2. At least four of the electives must come from this list:

6079 Administrative Law (3-4)

6010 Global Biosecurity Law (2-3)

6060 Human Rights (2-3)

6306 International Business Transactions (3)

6040 Law and Science Legal Research (1-2)

6023 National Security Law (2-3)

6342 Public International Law (3)

6323 Space Law (3)

6014 Telecommunications Law & Policy (2-3)

3.7.3. One capstone core course is required:

6319 Emerging Technologies Law (3)

3.7.4 Six courses and a minimum of 15 course hours are required.

_____ Total hours _____ Total number of courses

3.8 SCIENCE, ENGINEERING AND TECHNOLOGY LAW

3.8.1 One Capstone Core Course from §2.1.2.

3.8.2 Six electives which must be from courses listed in the concentration areas in this program.

3.8.3 A total of seven courses, and a minimum of 16 hours is required.

[3.9 Reserved.]

4.0 LAW AND SCIENCE EXPERIENTIAL REQUIREMENT

The experiential requirement for the Law and Science Concentration is an annual participation requirement for the 2L and 3L years and can be met through one or more of the following:

- 4.1 Making a presentation in a symposium sponsored by the Law and Science Program or the Center for Biodefense, Law and Public Policy such as the Law and Science Symposium.
- 4.2 Serving for an academic year in one of the top four officer positions in the student organization related to your area of concentration. The student organizations include but are not limited to: the Environmental Law Society (ELS); the Law and Science Association (LASA); the Intellectual Property Student Association (IPSA); the Mineral Law Interest Group (MLIG); the Biodefense Law Student Association (BLSA); and the Energy Interest Group (EIG).
- 4.3 A practicum in the specialization area of the law and science concentration, approved by the Director; and which may also qualify for externship credit through the School of Law supervised externship program.
- 4.4 Any other experiential activity supervised by a practicing attorney for a significant period of time or for a significant project.

5.0 GRADE REQUIREMENT

The student must maintain a minimum of a B (3.0) average in the core and elective courses taken toward credit for the Concentration.

6.0 WRITING REQUIREMENT

A paper on a topic in the specialization area of the law and science concentration must be completed by the student under the direction of an Associated Faculty member of the Law and Science Program, on the School of Law faculty. The paper must be a minimum of 25 pages in length, double-spaced, twelve-point font, Blue Book style footnotes, including sources from both law and science publications. Law sources must include primary or secondary sources and science sources must include a peer-reviewed science journal. The paper, meeting these requirements may be completed in the following manner:

- 6.1 Independent research with an Associated Faculty member. The student's Associated Faculty Advisor will most likely direct any independent research. This paper may be completed under the direction of the Associated Faculty member through an established schedule of no less than monthly meetings to review revised outlines and drafts with the student, until completion.
- 6.2 A paper written to satisfy a seminar or course requirement.
- 6.3 A paper written to satisfy a law journal writing requirement.

7.0 APPLICATION TO THE PROGRAM

The student may apply to the program anytime after enrollment, but not later than when the student has earned 45 semester hours credit.

8.0 ASSOCIATED FACULTY ADVISOR

Each student shall select or be assigned an Associated Faculty Advisor after the student submits an Intent to Complete Form to the Law and Science Concentration Program. Reassignments may be made upon request of the student or the advisor after consultation.

9.0 NEW COURSES AND NEW SPECIALIZATION AREAS

The Program Director shall have discretion to add new specialization areas and add relevant new courses to the list of electives which become available after the approval of this program. **New courses for 2022 are highlighted in yellow.**

10.0 UNFORESEEN/EXIGENT CIRCUMSTANCES

The Director shall have authority to modify, waive or reconfigure the Program Requirements where necessary to promote equity and fairness in the event of unforeseen complications or exigent circumstances.

11.0 CERTIFICATION

The Program Director shall certify that the student has met the requirements of this program before such designation may be made on the student's transcript. Notation on the student's transcript of participation in the Law and Science Concentration Program will be made after the student has applied, accepted into the program by the Director and has been assigned an Associated Faculty Advisor.

12.0 ADMINISTRATION

12.1 Award of the Law and Science Concentration for any student must be approved by the associated faculty member who directed the student and/or the Director.

12.2 Associated faculty may be added by the Director at any time.

The associated faculty members are as follows:

- _____ Prof. Steven Black (intellectual property, cybersecurity)
- _____ Prof. Amy Hardberger (water)
- _____ Prof. William Keffer (energy)
- _____ Prof. Jorge Ramirez (international)
- _____ Prof. Richard Rosen (biosecurity)
- _____ Prof. Brian Shannon (administrative)
- _____ Prof. Brie Sherwin (biosecurity, environment, water)
- _____ Prof. Rob Sherwin (intellectual property)
- _____ Prof. Victoria Sutton, Director (biosecurity, environment)

Victoria Sutton
Paul Whitfield Horn Professor
Program Director