At the University of Houston Law Center, we believe in **empowering** people with knowledge by **equipping** them with practical tools that can be readily implemented to **improve** the hydrocarbons sector and the economy of oil and gas producing countries.
Centers and Resources

The Center for U.S. and Mexican Law is the first research center in any U.S. law school devoted to the independent, critical study of Mexican law and legal aspects of U.S. – Mexico relations. Based at the University of Houston Law Center, the Center for U.S. and Mexican Law capitalizes on Houston’s position as a gateway between the United States and Mexico.

The Center frequently partners with other organizations to combine the Center’s expertise on Mexican law and U.S. – Mexican relations with the resources of partner organizations. The Center’s goal is to provide sophisticated, balanced analyses that take into account differences between the legal cultures of Mexico and the United States. Activities of the Center fall generally into five categories: Independent research; Sponsored research projects; Symposia; Visiting Professorships and Residencies at the University of Houston and Projects to enhance professional cooperation.

The Environment, Energy and Natural Resources Center (EENR Center) of the University of Houston Law Center is a leading international institution in the field of education and research on environmental and energy law. The EENR Center works with a network of scholars and professionals from different nationalities which together provide professional development and industry-specific education surrounding legal practices and policies in the oil and gas industry. Our network of experienced academic and professional experts contributes to the success of professional traineeship programs that promote a greater understanding of complex oil and gas operations and support compliance with best practices in these operations. The EENR Center curriculum focuses on the energy sector with an emphasis on sustainable development principles in the petroleum sector that balance energy development, the environment, and impacts on local communities.

Thus, the EENR Center is well suited to empower the best qualified professionals in the energy industry by equipping them with an outstanding education that centers on improved practices in the petroleum sector.
The Professional Traineeship Program comprises a series of courses which are part of the recently launched initiative of the University of Houston Law Center (UHLC) to provide advanced training courses in energy law specifically designed to follow the requirements of the Mexican Energy Reform.

Current Course Offerings:

1. Oil and Gas Commercial and Investment Arbitration by Prof. Julián de Cárdenas (10-15 Academic hours).

2. Global Shale Gas and LNG Regulation by Prof. Susan Sakmar (10-15 Academic hours).

3. Legal Management, Administration and Transfer of Geological, Geophysical, Seismic, Production Data and Exploration and Production Technology by Prof. Ricardo Colmenter (10-15 Academic hours).

4. The placement of investments in the energy sector (10-15 Academic hours)

5. The Identification and Implementation of Oil and Gas Industry Practices (10-15 Academic hours)

Other courses on related topics available include:

1. Joint Operating Agreements and other Instruments in the Relationship between Partners in the Exploration and Extraction of Hydrocarbons

2. Execution and Administration of Petroleum Contracts. Social and Environmental issues.

3. Farmout Agreements

4. International Sanctions Impacting the Energy Sector
III. COURSE DESCRIPTION

1. Oil and Gas Commercial and Investment Arbitration
Prof. Julián de Cárdenas (10-15 Academic hours)

The Professional Traineeship Course on Oil and Gas Commercial and Investment Arbitration will provide tools to expand skills on legal practice related to international dispute resolution and arbitration. In particular, the course will refine legal skills such as drafting, enforcing and litigating arbitration procedures in light of the 21st Century practice of arbitration in the oil and gas industry.

The legal practice related to the structuring of foreign investments in the oil and gas industry creates systems of dispute resolution in which arbitration plays a central role. In the particular case of Mexico this is especially relevant considering the arbitration clause included in the Mexican Model Contracts of Production Sharing Agreements and Concession Agreements, and the arbitration clauses also included in International Investment Agreements such as NAFTA or the network of investment agreements ratified by Mexico. Furthermore, arbitration clauses can be found in almost all of the petroleum contracts involving the performance of oil and gas operations such as service contracts, procurement contracts and joint operating agreements. Hence, the course aims to provide practical skills in the negotiation of arbitration clauses and the enforcement of these clauses. The course will also evaluate arbitration procedures, taking into account the recent evolution of oil and gas litigation in Latin America by oil producing countries such as Venezuela, Ecuador and Argentina.

Topics to be covered in the course include:

- Introduction to Commercial and Investment Arbitration in the Oil and Gas Industry.
- Drafting and Enforcing Efficient Arbitration Clauses.
- Arbitration Clauses in Bilateral and Multilateral Investment Treaties.
- Filing and Responding Arbitration Claims.
- Interim Measures.
- The Appointment of International Arbitrators.
- Challenging International Arbitrators.
- Arbitration Procedure.
- The Arbitration Award.
- Challenging an Arbitration Award.
- Systems of Enforcement of an Arbitration Award.
- The Costs of International Arbitration (Investment and Commercial).
- Interaction Between National Courts and the Arbitration Tribunals in the case of the Mexican Energy Reform.
- The role of Government Officials in dispute prevention, dispute preparation, and dispute management.

The course can be delivered in English and/or Spanish
III. COURSE DESCRIPTION

2. Global Shale Gas and LNG Regulation
   Prof. Susan Sakmar (10-15) Academic hours)

The Professional Traineeship Course on Shale Gas and LNG aims to provide participants with the knowledge they need to navigate the myriad of legal, policy and environmental issues pertaining to global natural gas markets with a particular focus on global shale gas development and the development of LNG import and export projects around the world, including recent developments in US LNG export projects.

The first half of the course will explore the growing role that natural gas will play around the world in the context of global shale gas development. By most accounts, shale gas development in the United States has been a “game changer” that could be replicated around the world so long as the right regulatory and environmental frameworks are put in place.

This course will explore the existing regulatory and environmental frameworks for shale gas, especially those in the United States, as well as frameworks being developed around the world with the objective of exploring the substantive law of shale gas development as well as developing the analytical and practical skills necessary to the practice of law.

The second half of the course will explore the growing role LNG is expected to play as the “glue” linking global gas markets. The course will explore the opportunities and challenges for various LNG import and export projects around the world in the current contextual reality wherein energy law and policy are increasingly intersecting with environmental law and geopolitics.

Topics to be covered in the course include:

- History and evolution of the shale gas industry – what is shale gas?
- Identify the key environmental issues related to hydraulic fracturing and the regulatory responses to these issues.
- Key water-management issues related to hydraulic fracturing, such as water acquisition, use, reuse, and disposal.
- Analysis of the key regulatory frameworks for U.S. shale gas development including focused discussion on key shale producing states such as Texas and Pennsylvania.
- What is the potential for shale gas development globally?
- Analysis of the key regulatory frameworks that are emerging for global shale gas development.
- The entire LNG value chain, including a discussion of the liquefaction process, LNG shipping, and regasification.
- The evolution of LNG markets including the history of LNG and an overview of the three major LNG markets.
- A description and overview of key LNG supply projects around the world.
- The primary markets driving LNG demand around the world.
- LNG contracts and trade in a globalized market.
- Safety and environmental issues related to the construction of LNG terminals.
- The potential impact of shale gas on global gas markets.

The course can be delivered in English
III. COURSE DESCRIPTION

3. Legal Management, Administration and Transfer of Geological, Geophysical and Seismic Data National
Prof. Ricardo Colmenter (10-15 Academic hours)

The Professional Traineeship Course on Legal Management, Administration and Transfer of Geological, Geophysical, Seismic and Production of Data and Technology aims to provide tools to expand skills on legal practice related to production, acquisition, protection, use and transfer of data and technology related to the exploration and production of hydrocarbons. In particular, the program seeks to train the participants on Non Disclosure Agreements (NDA), contracts for data acquisition, license and assignment of data and technology in the oil and gas industry taking into consideration the strategic and commercial value of these intangible assets for Mexico and operators (NOC and IOC).

The oil industry is founded upon the pursuit and acquisition of seismic and geological data, and innovative technologies. Access to technology and data management play a key role in the exploration and production of oil and gas. Even in the face of significant fluctuations of oil prices, corporations continue to make significant investments in the acquisition of data and new technologies which are frequently traded, exchanged, and transferred among the individual actors. Regulatory agencies, IOCs, NOCs, service companies, laboratories and universities trade their systematic knowledge through legal relationships by which the owner/originator of an invention, data, information, software, utility model, or know-how sells, assigns or grants a license to use the intellectual property to the secondary user.

This course will analyze what motivates business actors in the oil and gas industry to adopt and invest in new technology and data acquisition, how they protect these important assets, and finally, how they trade intangibles in order to reach their economic goals. These issues will be examined under the context and perspective of both Latin American energy markets and Mexico in particular.

Topics to be covered in the course include:
• Data acquisition, protection and ownership of the data and the intangible property enclosed in such information.
• Protection of database, copyrights, trade secrets and the patents system.
• Contractual model for surface exploration activities
• Multi-client contracts for data acquisition.
• Surface exploration and management of information obtained as a result of those services.
• Access to Data and Licenses contracts.
• Non-disclosure agreement.
• Assignments contracts
• Technology transfer as motivation for the Mexican energy reform.
• Technology transfer as a component of National content calculation.
• Delivery of new geological petrophysic, seismic and production information to the CNH by Contractor.
• Innovative mechanisms worldwide in relation to the protection and management of geological, geophysical and petrophysical information.
• Processing / reprocessing / marketing data previously acquired by Pemex and whose confidentiality expired.

The course can be delivered in English and/or Spanish
III. COURSE DESCRIPTION

4. The Placement of Investment in the Energy Sector (10-15 Academic Hours)

Foreign and national investment in the energy sector require the structuring of a legal framework adapted to the long-term protection of these investments.

The evolution of international energy law has confirmed the appropriateness of stabilization clauses, economic equilibrium clauses as well as enforceable dispute resolution mechanism.

The placement of investments involves studies of due diligence, applicable legal framework, as well as the economic modeling of the project. This would be fundamental for the participation in bid rounds, as well as in projects involving direct application as contractors.

This course focuses on the structuring of energy investments not only on the local perspective of the Host Country, but also from the integration of projects in a global economic market where access to funding and technology is limited and competitive and requires from investors the appropriate approach to the legal regime applicable to its participation in the energy market.

Topics to be covered in the course include:

- Rules of incorporation for energy companies in the energy sector.
- Due diligence requirements for the settlement of investment in the energy market (local and global).
- Competitiveness and Nearshoring.
- Local rules of protection and financial interest.
- Relevant rules of taxation, labor, environmental law, anticorruption law and social responsibility.
- Protection of intellectual property and data.
- International treaties of protection for foreign investors and investments.
- Digitalization of the oil and gas field.
- The identification and enforcement of international industry practices.
- International sanctions affecting the placement of energy investments
- Local and international dispute resolution.

The course can be delivered in English and/or Spanish
5. **Identification and Implementation of International Oil and Gas Industry Practices (10-15 Academic Hours)**

Foreign and International best practices of the oil and gas industry constitute transnational rules that the industry considers necessary for its functioning in a sector that operates in a globalized market. These practices can emerge from national or non-state regulation created by professional associations of the industry or international organizations such as: the American Petroleum Institute (API), Norsk Sokkels Konkurranseposisjon (NORSOK), the International Maritime Organization (IMO), the International Organization for Standardization (ISO), the International Association of Drilling Contractors (IADC), the International Association of Geophysical Contractors (IAGC), among others.

An international oil and gas industry practice can be mandatory due to its recognition as a generally accepted procedure or method by the international oil and gas industry. Thus, identifying such practices is a fundamental task for regulatory agencies, operating companies, service companies and multiple industry players, given their common reference in oil exploration and production contracts, in Joint Operating Agreements (JOA), in service contracts, procurement contracts, and national laws on hydrocarbons.

Three clear useful elements provide the reference to best practices in the legal framework of a project: 1) They allow the global operation of transnational oil companies since standardized techniques and procedures allow operators to develop activities in different producing countries; 2) Industry practices are common rules generally accepted by operators; and 3) International practices can fulfill a role of complementarity or balance vis-à-vis national regulations.

In this sense, this course allows studying the identification of international practices in the oil and gas industry, as well as their implementation models and their mandatory force for operating companies, services and national hydrocarbon agencies, highlighting the reality recent in which States and regulatory bodies have sued oil companies for non-compliance with these industry practices in cases before national courts and international arbitratio.

### The Program:

1. **Introduction:**
   - Industry best practices as common rules for the global oil and gas industry.
   - The importance of the standardization of technical rules in the oil and gas industry.

2. **Requirement to use international industry best practices**
   - Constitutional references.
   - Legal references.
   - Contractual references.
   - References in oil and gas model contracts.
   - References in international arbitration and national courts.

3. **Identification of international industry best practices**
   - Identification of the Organizations that create International Practices.
   - Identification of catalogs containing international best practices.
   - Identification of practices required by national regulators.

4. **Implementation of the best international industry practices.**
   - Contractual agreements.
   - Expert determination
   - Arbitration determination
   - National court determination

The course can be delivered in English and/or Spanish.

- Jurisprudence on the mandatory force of the best international industry practices. The case of States that demand non-compliance regarding best industry practices and defense techniques used by operating companies.

5. **Experience from comparative law cases in the implementation of international best practices in the oil and gas industry.**
   - Mexico.
   - Brazil.
   - Colombian.
   - Nigeria.
   - UK
   - Norway

6. **Regulatory Models of the Best Practices of the Oil and Gas Industry**
   - The Prescriptive Model of Regulation of the Oil Industry.
   - The Non-Prescriptive Model of Regulation of the Oil Industry. The ALARP Principle.
   - The Mixed Model of Regulation of the Oil Industry.
   - The Burden of Proof in the Application of Best Practices.
   - The Precautionary Principle.
IV. FACULTY

Faculty and Coordinators:

Prof. Julián de Cárdenas, Director of the Center for U.S. and Mexican Law and Research Professor at the EENR Center of the University of Houston Law Center

Prof. Ricardo Colmenter, Affiliate Scholar for International Energy Programs - Center for US and Mexican Law

Prof. Julián de Cárdenas

Julián Cárdenas is a Research Professor and Energy Scholar at the Environment, Energy and Natural Resources Center of the University of Houston Law Center, where he teaches the courses Diplomacy and Geopolitics of Oil and Gas, Transnational Petroleum Law, and Transnational Investment Law and Arbitration. He is the Director for the Center of U.S. and Mexican Law at the University of Houston Law Center. He has also taught these courses at the Autonomous University of Nuevo Leon, in Monterrey, Mexico, ITAM University, in Mexico City, and the University of Externado, Bogota, in Colombia.

He frequently works with companies, public authorities, and governments in various areas of oil and gas law and policy. At the EENR Center, he is the coordinator of the "Inter-American Hydrocarbons Regulators Dialogue," an initiative conceived to create a nexus between national hydrocarbons agencies, the private sector, and the academia. In 2018, he led a team from the University of Houston providing technical assistance to the reform of the hydrocarbons code of the Republic of Gabon. After the reform of the Code, the country restored its potential in bid rounds achieving the assignment of new contracts to more than a dozen of Oil and Gas companies. Since June 2019, he sits on the Ad Hoc Administrative Board of Directors of Petróleos de Venezuela (PDVSA), the Venezuelan National Oil Company. He is a frequent lecturer to oil and gas service companies, operators and government agencies on oil and gas investment matters, best practices in the petroleum industry, and geopolitics of the oil and gas industry in conferences on energy law in the U.S., Canada, France, Scotland, the Netherlands, Mexico, Brazil, Cuba, Ecuador, Colombia and Venezuela. He works effectively in Spanish, French and English, and has some working proficiency on Portuguese.

Prof. Ricardo Colmenter

Ricardo Colmenter is the Director of Entra Consulting. He was previously General Counsel for the Western Hemisphere of Weatherford International; a member of Halliburton's legal department; partner at Johnson and Cato law firm and Legal Director of the Venezuelan Patent and Trademark Office. He holds a JD from the Universidad Catolica Andres Bello; LLM International Intellectual Property from Lund University Sweden; and an LLM in Intellectual Property & Information Law, University of Houston Law Center.

Mr. Colmenter is an adjunct professor at the University of Houston, and participates as lead chairman and program Director for advanced training courses for legal and business development departments of National Oil Companies (Pemex, Petrobras, Petroecuador and Ecopetrol) and regulatory agencies (CNH and Secretaria de Hidrocarburos del Ecuador) sponsored by University of Houston, the Instituto Tecnologico Autonomo de Mexico (ITAM), Universidad de la Sabana in Colombia, and with National Oil Companies and International Oil Companies. He is the author of law books and law articles regarding international oil transactions, technology transfer in the oil industry, and oil and gas international business. He frequently speaks at international seminars, symposiums, and colloquium. His practice centers on transactional law with a strong business perspective, which involves structuring multi-million dollar energy integrated service contracts, mergers and acquisitions in the oil industry, and sophisticated oil and gas projects. He has more than 18 years of oil and gas international business experience with an extensive international network and strong negotiation skills from his experience as the Venezuela representative before the Andean Community and the Americas Free Trade Area.

Ricardo was included in the latest edition of the Corporate Counsel 100 Latin America (Legal 500), which identifies the most influential and innovative in-house counsel working in the region.
Faculty:

Prof. Susan Sakmar

Visiting Professor of Law, University of Houston Law Center

Susan L. Sakmar is licensed to practice law in California and has over 20 years of experience working in a variety of legal, corporate, nonprofit, and academic environments. She began her professional career as an accountant for Chevron Corporation in San Francisco, California and left Chevron to pursue a law career. Prior to teaching, she was an attorney in the commercial litigation department of a major San Francisco firm, where she represented clients in a variety of complex litigation cases. She has also served on a number of nonprofit environmental boards, including Board Chair for the Jane Goodall Institute, founded by world-renowned chimpanzee expert Dr. Jane Goodall. She is currently a Visiting Professor at the University of Houston Law Center, where she teaches a course on Shale Gas & LNG. She also consults on various aspects of global gas markets and is working on a number of training projects related to LNG, as well as several projects focused on the environmental and regulatory issues for global shale gas development.

She holds an LL.M. from Georgetown University Law Center, Washington, DC; a J.D., cum laude, from the University of San Francisco School of Law, San Francisco, CA.; and a business degree (B.Sc.) from the University of Colorado, Boulder, CO. Her recent book, Energy for the 21st Century: Opportunities and Challenges for Liquefied Natural Gas (LNG), was chosen as an Outstanding Academic Title for 2014 by Choice Magazine, a widely read publication by academic librarians. The book provides a comprehensive overview of the entire LNG value chain and analyzes the critical role LNG will play in the 21st century as the “glue” linking global gas markets. The book is available on Amazon http://www.amazon.com/dp/1849804214 or direct from the publisher http://www.e-elgar.co.uk/bookentry_main.lasso?id=14131.
The Professional Traineeship Program comprises a series of courses which are part of the recently launched initiative of the University of Houston Law Center (UHLC). The fee per participant for each course is USD 1,500. A minimum of 10 participants is required to request the organization of each course. This price can be reduced to government agencies. Government agencies executing a cooperation agreement with the EENR Center can receive a special discount.

This fee covers lectures, course materials, certificate diploma and course administration.

Further information:

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