Initiative for Sustainability & Energy at NU (ISEN)

ISEN 404-0 Resource Markets Design, Regulation and Reform (1 Unit)
This course will explore the evolution of the natural resource markets in the United States through the lens of the regulatory and quasi-governing agencies that have shaped their structure. The course will focus electric power markets but will compare these market structures with those that govern water and other relevant systems. Students will also study current state and federal policy innovation creating or slowing current market reform.

ISEN 410-0 Topics in Contemporary Energy and Climate Change (1 Unit)
ISEN 420-0 NUvention: Energy (1 Unit)
ISEN 440-0 Private Energy & Sustainable Infrastructure Development and Finance (1 Unit)
This course takes students through the design, permitting, financing and implementation process of energy infrastructure development, including natural gas plants, solar and wind farms, hydro, and electric storage. The objective of this course is to help students gain an understanding of the legal, financial, and engineering tools and factors affecting the projected lifetime value of various energy systems.

ISEN 440-1 Introduction to the Light Hydrocarbon Economy (1 Unit)
A survey course on all aspects of light hydrocarbons as a bridge to a net-zero carbon economy.

ISEN 440-2 Introduction to the Light Hydrocarbon Economy (1 Unit)
A survey course on all aspects of light hydrocarbons as a bridge to a net-zero carbon economy.

ISEN 462-0 Sustainable Supply Chain Management - Principles, Trends & Practical Realities (1 Unit)
This class will cover three main topics: 1) the basic principles of supply chain management, 2) evolving trends in sustainable supply chain and 3) the practical realities of driving sustainable practices into the supply chain operations.

ISEN 490-1 Modern Techniques in Heterogeneous Catalysis Research (1 Unit)
A laboratory course supplemented by lectures, discussions, and review of current literature. Designed to develop proficiency in modern methods of the study of heterogeneous catalysts, as well as associated skills in critical thinking and oral and written communication.

ISEN 490-2 Modern Techniques in Heterogeneous Catalysis Research (1 Unit)
A laboratory course supplemented by lectures, discussions, and review of current literature. Designed to develop proficiency in modern methods of the study of heterogeneous catalysts, as well as associated skills in critical thinking and oral and written communication.

ISEN 495-0 Special Topics in Energy and Sustainability (1 Unit)
ISEN 498-0 Energy & Sustainability Project Practicum - 10 week consulting project for credit (1 Unit)
This is a 10-week consulting project for a corporate, non-profit or government partner of Northwestern University. The projects will be pre-selected by the instructor and students can submit preferences for their top 3 projects. All projects will have a clearly defined scope and deliverables and the projects will include economic, technical and regulatory / policy aspects to the analysis.