

# VIPER ENERGY COURSE (UNVE)

Code	Title	Course Units
BIOL 1604	Humans and the Environment	1
CBE 3750	Engineering and the Environment	1
CBE 5050	Carbon Capture	1
CBE 5250	Molecular Modeling and Simulations	1
CBE 5430	Sustainable Development of Water Resource Systems	1
CBE 5450	Electrochemical Energy Conversion and Storage	1
CBE 5460	Fundamentals of Industrial Catalytic Processes	1
CHEM 1200	Environmental Chemistry	1
EAS 3010	Climate Policy and Technology	1
EAS 4010	Energy and Its Impacts: Technology, Environment, Economics, Sustainability	1
EAS 4020	Renewable Energy and Its Impacts: Technology, Environment, Economics, Sustainability.	1
EAS 4030	Energy Systems and Policy	1
EAS 5010	Energy and its Impacts: Technology, Environment, Economics, Sustainability.	1
EAS 5020	Renewable Energy and Its Impacts: Technology, Environment, Economics, Sustainability	1
EAS 5030	Energy Systems and Policy	1
EAS 5050	Climate Policy and Technology	1
EESC 2300	Global Climate Change	1
EESC 4336	Ocean-Atmosphere Dynamics and Implications for Future Climate Change	1
EESC 4400	Biogeochemistry	1
EESC 5010	The Geology and Geography of Energy Resources	1
EESC 6610	Sustainable Development of Water Resource Systems	1
ENGR 2500	Energy Systems, Resources and Technology	1
ENVS 3103	Penn Global Seminar: Case Studies in Environmental Sustainability	1
ESE 2180	Electronic, Photonic, and Electromechanical Devices	1.5
ESE 5210	The Physics of Solid State Energy Devices	1
MEAM 5020	Energy Engineering in Power Plants and Transportation Systems	1
MEAM 5030	Direct Energy Conversion: from Macro to Nano	1
MEAM 5040	Tribology	1
MEAM 5430	Performance, Stability and Control of UAVs	1
MEAM 5610	Thermodynamics: Foundations, Energy, Materials	1

MSE 2150	Introduction to Functional Materials: From Macro to Nanoscale	1
MSE 5450	Materials for Energy and Environmental Sustainability	1
PHYS 0016	Energy, Oil, and Global Warming	1
PHYS 3314	Ocean-Atmosphere Dynamics and Implications for Future Climate Change	1