ENERGY AND MINERAL ENGINEERING (EME)

EME 301: Thermodynamics in Energy and Mineral Engineering
3 Credits
Treatment of classical thermodynamics targeted to the needs of students in the Department of Energy and Mineral Engineering.

Prerequisite: CHEM 112 and PHYS 212 ; MATH 250 or MATH 251

EME 303: Fluid Mechanics in Energy and Mineral Engineering
3 Credits
Treatment of fluid mechanics targeted to the needs of students in the Department of EME.

Prerequisite: MATH 250 or MATH 251 and PHYS 211

EME 407: Electrochemical Energy Storage
3 Credits
Electrochemical concepts in energy storage devices, cell construction and materials involved in batteries and capacitors, electrochemical testing methods and applications.

Prerequisite: EME 301 or M E 300 or CH E 220 and EME 303 or M E 320 or CH E 330 or their equivalent

EME 432: Energy Policy
3 Credits
Analysis, formulation, implementation, and impacts of energy-related policies, regulations, and initiatives.

Prerequisite: E B F200 , EGEE 120 , PL SC490
Cross-listed with: GEOG 432

EME 444: Global Energy Enterprise
3 Credits
Industry perspective on the resources, technologies, engineering approaches and externalities involved in satisfying worldwide energy demand profitably and sustainably.

Prerequisite: ECON 004 or equivalent, EGEE 102 , EGEE 120

EME 466: Energy and Sustainability in Society
3 Credits
Capstone course in energy technology and policy options for reduced-carbon communities. Covering agent/stakeholder relations, sustainability, communication and public engagement.

Prerequisite: GEOG 030 , METEO469 , EME 432

EME 460: Geo-resource Evaluation and Investment Analysis
3 Credits
The course covers engineering evaluation of geo-resources, present value and rate of return analysis, mineral property and reserve estimation, and cost estimation and engineering economy concepts applied to geo-resources including energy and minerals.

Prerequisite: 5th semester or higher