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 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 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

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