Sample Course Template

System Integration (required: 3 credits)
ESENG 501. Seminars on Energy Systems, Technology and Policy (Fall)

Engineering Core (9 credits)
REQUIRED COURSE ME599-4: Energy Technologies (Winter)
ME 499. Advanced Energy Systems (Fall)
ME 599-001. Fundamentals of Energy Conversion (Fall)
ME 537. Advanced Combustion (W)
ME 589. Ecological Sustainability in Design and Manufacturing (Fall)

Energy Systems (6 credits)
CEE 460. Design of Environmental Engineering Systems (Fall)
ECON 435. Financial Economics (Winter, Fall)
IOE 452. Corporate Finance (Fall)
IOE 453. Derivative instruments (Winter)
IOE 434. Human Error and Complex System Failures (Winter)
IOE 539. (Mfg 539) Occupational Safety Engineering (Fall)
ME 563. (IOE 565) (MFG 561) Time Series Modeling, Analysis, Forecasting (Fall)
NRE 574. Sustainable Energy Systems (same as PPOL 519) (Fall)

Energy Specialties (9 credits: two from same area; one may come from another area)
1) CIVIL POWER:
ME 533. Radiative Heat Transfer (Fall)
AERO 533. Combustion Processes (Fall)
NERS 442. Nuclear Power Reactor (Winter)

2) TRANSPORTATION POWER:
AERO 464. The Space Environment (Fall)
AERO 536. Electric Propulsion (Fall)
AUTO 563. Dynamics and Controls of Automatic Transmissions (Winter, alternate years)
ME 438. Internal Combustion Engines (Fall)
ME 533. Combustion Processes (Fall)
ME 538. Advanced Internal Combustion Engines (Winter)

3) MICROELECTRONIC AND PORTABLE POWER:
EECS 414. Introduction to MEMS (Fall)
ME 553. Microelectromechanical Systems (Winter, Alternate Years)
EECS 514. Advanced MEMS Devices and Technologies (Winter)
EECS 515. Integrated Microsystems (Fall)
EECS 529. Semiconductor Lasers and LEDs (Fall)
ME 559. Smart Materials and Structures (Winter)

PROJECT (required: 3 credits)
ESENG 503. Projects in Energy Systems Engineering