

Mechanical Engineering

Energy and the Environment

Master of Engineering: 30 Credits or 10 Courses

The standard course plan for each consists of five courses from the core area and five technical electives. Special programs can also be arranged for those students with broad interests in mechanical engineering. There is no research or thesis required for this degree.

Graduate Certificate in Engineering: 12 credits or 4 courses

Students pursuing this option typically complete four mechanical engineering core courses.

Energy & The Environment Core (choose five)

ENME647 Multiphase Flow and Heat Transfer

ENPM621 Heat Pump and Refrigeration Systems Design Analysis

ENPM622 Energy Conversion I - Stationary Power

ENPM623 Control of Combustion Generated Air Pollution

ENPM624 Renewable Energy Applications *or* **ENME 701** Sustainable Energy Conversion and the Environment

ENPM625 Heating, Ventilation and Air Conditioning of Buildings

ENPM626 Waste to Energy Conversion

ENPM627 Environmental Risk Analysis

ENPM635 Thermal Systems Design Analysis *or* **ENME635** Energy Systems Analysis

ENPM651 Heat Transfer for Modern Application

ENPM654 Energy Systems Management

ENPM656 Energy Conversion II -- Mobile Power

Energy & The Environment Technical Electives (choose 5)

ENME631 Advanced Conduction and Radiation Heat Transfer

ENME632 Advanced Convection Heat Transfer

ENME633 Molecular Thermodynamics

ENME646 Computational Fluid Dynamics

ENME707 Combustion and Reacting Flow

ENME712 Measurement, Instrumentation and Data Analysis for Thermo-Fluid Processes

ENPM650 Solar Thermal Energy Systems

ENPM670 Advanced Energy Audit and Conservation

ENPM808A Advanced Thermal Power Plants

ENPM808G Additive Manufacturing for Aerospace, Energy and Water Applications

ENPM809M Power System Integration of Renewable Energies

Additional technical electives must be approved by academic advisor.

Course Notes:

Credit will only be granted for ENPM624 or ENME701, not both courses

Credit will only be granted for ENPM635 or ENME635, not both courses

Preliminary 10-Course Plan

Mechanical Engineering—Energy and The Environment

Name:			Date:					
UID:								
Fall			Spring			Summer		
Course	Core/ Elective	Credit	Course	Core/ Elective	Credit	Course	Core/ Elective	Credit
Fall			Spring			Summer		
Course	Core/ Elective	Credit	Course	Core/ Elective	Credit	Course	Core/ Elective	Credit
Fall			Spring			Summer		
Course	Core/ Elective	Credit	Course	Core/ Elective	Credit	Course	Core/ Elective	Credit
Fall			Spring			Summer		
Course	Core/ Elective	Credit	Course	Core/ Elective	Credit	Course	Core/ Elective	Credit
Fall			Spring			Summer		
Course	Core/ Elective	Credit	Course	Core/ Elective	Credit	Course	Core/ Elective	Credit