

# Mechanical Engineering

## Energy and the Environment

### Master of Engineering: 30 Credits / 10 Courses

The standard course plan for each consists of five courses from the core area and five technical electives. There is no research or thesis required for this degree.

Energy & The Environment Core (choose five)	
ENME647	Multiphase Flow and Heat Transfer
ENPM621	Heat Pump and Refrigeration Systems Design Analysis (every fall)
ENPM622	Energy Conversion I - Stationary Power* (every fall)
ENPM623	Engineering Combustion Emissions for Air Pollution Control (every other fall)
ENPM624	Renewable Energy Applications* (every fall) or ENME 701 Sustainable Energy Conversion and the Environment*
ENPM625	Heating, Ventilation and Air Conditioning of Buildings (every 1.5 years)
ENPM626	Waste and Biomass Energy Conversion (every other summer)
ENPM627	Environmental Risk Analysis* (every 1.5 years)
ENPM635	Thermal Systems Design Analysis* (every 1.5 years) or ENME635 Energy Systems Analysis*
ENPM651	Heat Transfer for Modern Application* (every 1.5 years)
ENPM654	Energy Systems Management* (every summer)
ENPM656	Energy Conversion II – Mobile Power* [ENPM672 or equivalent] (every spring)

Energy & The Environment Pre-Approved 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
ENME744	Additive Manufacturing
ENPM650	Solar Thermal Energy Systems* (every spring)
ENPM660	Wind Energy Engineering* (every fall online)
ENPM670	Advanced Energy Audit and Conservation*
ENPM808G	Additive Manufacturing for Aerospace, Energy and Water Applications*
ENPM809M	Fundamentals of Power Electronics for Energy Systems* (every other fall)

NOTE: Any courses not listed above must be approved by the Senior Academic Advisor **PRIOR** to registration.

KEY	
Online Option *	(offering information)

DISCLAIMER: All offerings are tentative and subject to change.

Updated 1/5/2021

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[Prerequisite course]