Fuel Cell Systems for Automotive Applications

This 8-hour self-paced seminar on DVD, is primarily an overview of the popular fuel cell technology, rather than a detailed analysis of fuel cell systems. The seminar provides an overview of the fuel cell topics covered in the ME7383 graduate course on Electrochemical Energy Conversion and Storage Systems.

Lectures will cover the following topics:

- Technology overview, demonstration projects and initiatives
- Types of fuel cells (PEM, SOFC, other)
- Basic principles of fuel cells stacks
- Fuel cell stacks vs. fuel cell systems, system needs and configuration
- Fuels and fuel infrastructure issues, reformers
- Characteristics of fuel cell stacks and complete fuel cell systems
- Stack and system efficiency
- “Well-to-wheel” energy analysis
- Requirements for automotive fuel cell systems
- Traction vs. APU fuel cell systems

Prerequisite: Basic undergraduate understanding in electrical systems, thermodynamics, and automotive systems.

Ohio State University’s automotive engineering certificates include international collaboration with European partners, Swiss Federal Institute, ETH, and University of Stuttgart, as well as with Asian partner, Korean Advanced Institute of Science and Technology.

For detailed information on Ohio State University’s automotive engineering certificates, visit our web site listed below.