

POWERTRAIN ELECTRIFICATION, CAPSTONE CERTIFICATE

Electrification of automotive powertrains has become the main technology path to enhance fuel economy and reduce greenhouse gas emissions. The Powertrain Electrification capstone certificate is fully online and deals with systems, components and their interactions. Based on the degree of electrification, the topology of powertrain can change in complexity and controllability. This capstone certificate spans micro, mild, full and plug-in hybrid vehicle architectures, with delineations for matching performance specifications and component sizing. A deep immersion will be taken into the fundamental characteristics of engines, transmission, batteries, motors, generators and power electronics such as inverters, DC-DC converters and on-board chargers.