

POWERTRAIN ELECTRIFICATION, CAPSTONE CERTIFICATE

The Capstone Certificate in Powertrain Electrification is no longer accepting applications after Fall 2026. The program will be discontinued Fall 2027. If you have any questions, please contact the department (see contact box).

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.