

VEHICLES AND MOBILITY

The Department of Mechanical Engineering offers an undergraduate certificate program in the area of Vehicles and Mobility. The program is based on the elective courses of the bachelor of science in engineering degree in mechanical engineering (BSE-ME) program regularly offered by the Department of Mechanical Engineering. The earned credit hours can be applied simultaneously to the certificate program and an undergraduate degree program at the University of Michigan - Dearborn.

The program can be completely entirely on campus, with some courses occasionally offered in the asynchronous online mode.

Principles and methods of mechanical engineering find widespread application in vehicle and mobility technology. The certificate program offers undergraduate students the opportunity to deepen their understanding of these applications and receive official recognition in the field.

Only courses completed with grade B or better will be counted toward the certificate. A minimum certificate grade point average of 3.0 is required to obtain the certificate.

Certificate Requirements

The certificate program requires a minimum of 9 credit hours.

Code	Title	Credit Hours
Select a minimum of 9 credit hours from the following:		
ME 410	Finite Element Methods with Application	3
ME 472	Prin & Appl of Mechatronic Sys	4
ME 493	Advanced Vehicle Energy Systems	3
ME 496	Internal Combustion Engines I	3
ME 4981	Automotive Engineering	4
ME 4910	Degradation of Materials	3
ME 4500	Design of Automotive Chassis and Body Systems	3
ME 4550	Computational Uncertainty Quantification for Engineering Applications	3
ME 4790	Aerodynamics of Road Vehicles	3

Notes:

1. Up to 4 credit hours can be transferred from a degree-granting program at another institution.
2. Pass/fail courses are not allowed.
3. All applicable credits earned in the certificate program can be applied toward one University of Michigan – Dearborn degree program.
4. Credits earned in the certificate program cannot be applied toward another certificate program.