The University of Michigan-Ann Arbor
Master of Engineering in Global Automotive and Manufacturing Engineering
(Global M. Eng.)

Program Overview:
The MEng in Global Automotive and Manufacturing Engineering degree is a 30 credit-hour program that aims to create technical leaders for the automotive industry with knowledge on both product development and production. The curriculum is designed to emphasize outstanding depth and breadth in pertinent engineering disciplines, knowledge of basic management issues, awareness of global industry and market trend, and ability to lead global product development or production teams.

Degree objectives
Upon completion of the Master of Engineering in Global Automotive and Manufacturing Engineering, a student will demonstrate:

- Comprehensive knowledge in the product development and manufacturing of automotive systems
- Thorough understanding of the fundamental knowledge in Automotive Engineering and Science
- Technical proficiency in one of the strategically aligned specialties in automotive systems, systems integration, or manufacturing.
- Ability to integrate and apply sound global business concepts to engineering applications
- Competence in building and leading effective globally distributed teams that are diverse in terms of culture, business environment, and disciplinary perspective
- Capacity to develop and effectively manage technical projects
- Ability to leverage the aforementioned competencies to develop innovative solutions for a global automotive market.

Degree requirements
- Complete a plan of study (POS) with a minimum 30 credit hours of which:
  - 24-credit hours of the 30 must be UM coursework (up to 6-semester credits of non-UM coursework—with a grade of B or better, may be transferred)
  - 21-credit hours must be 500-level or above
  - 27-credit hours must be letter-graded coursework (not pass/fail)
- A minimum grade point average of 5.0/9.0 (i.e., a “B” average) is required for graduation.
- Satisfy ONE of the following global component requirements:
  - Successfully complete a course on the approved POS whose credit comes from a non-US university.
  - Successfully complete capstone project course at a country outside of the U.S.
- Complete all of the courses on the approved POS within five years from the date of first enrollment in the program

Admissions Requirements
- A Bachelor degree in Engineering or Physical Sciences (Physics, Biophysics, Applied Mechanics, Environmental Sciences) from an ABET accredited institution in the U.S. or the international equivalent with at least two years of college engineering mathematics. Degree must have been completed in good standing (generally defined as a US GPA of B (-3.2 or above) or higher)
- A minimum cumulative of two years of engineering work experience At least two years of full time relevant industrial experience. Students with outstanding qualifications who do not have two years of industrial work experience can be considered for admission if they have two (2) relevant summer internships or co-op experience of four months.
- International students for whom English is not their first language, must take a Test of English as a Foreign Language (See details in the Online Application Process).
- The Graduate Record Examination (GRE) general portion is highly recommended but not required.
The University of Michigan -Ann Arbor (UM)
Master of Engineering in Global Automotive and Manufacturing Engineering
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<tr>
<th>CURRICULUM</th>
<th>Semester Credits</th>
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<td>Systems Integration</td>
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<td>Engineering Core</td>
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<td>Management and Systems</td>
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<td>Specialties</td>
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<td>Project</td>
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<td><strong>PROGRAM TOTAL:</strong></td>
<td><strong>30</strong></td>
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Systems Integration (6 credits):
- AUTO501 Integrated Vehicle System Design 3
- MFG502 Manufacturing System Design 3

Engineering Core (6 credits):
- ME458 Automotive Engineering 3
- MFG452 Design for Manufacturability 3
- IOE461 Quality Engineering Principles and Analysis 3

Management and Systems (6 credits):
- AUTO599 Vehicle Program Implementation 3
- Additional courses are being developed

Specialties (9 credits) (all 9 credit hours must come from the same specialty):

Product Development Specialties
- AUTO563 Dynamics and Control of Automatic Transmissions 3
- ME438 Internal Combustion Engines 4
- ME505 Finite Element Methods in Mechanical Engineering 3
- ME513 Automotive Body Structures 3
- ME542 Vehicle Dynamics 3
- ME568 Vehicle Control Systems 3

Manufacturing Specialty
- EECS569 Production Systems Engineering 3
- ME583 Science Base for Reconfigurable Manufacturing 3
- ME587 Global Manufacturing 3
- ME588 Assembly Modeling for Design and Manufacturing 3
- ME589 Eco-Design and Manufacturing 3
- MSE514 Composite Materials 3

Project (3 credits):
- ** AUTO503 Automotive Engineering Project** OR 3
- ** MFG503 Manufacturing Project** 3

**TOTAL PROGRAM:** 30

* Courses that fulfill the Global Component Requirement
** May fulfill the Global Component Requirement if project team is internationally comprised and pre-approved by the UM faculty member.