

 <p>HENRY FORD COLLEGE FUTUREDRIVEN</p>	<p align="center">Articulation Agreement Curriculum Guide Henry Ford College <i>Associate of Applied Science (AAS) Pre- Engineering: Mechanical/Industrial (Mechanical Pathway)</i> Wayne State University <i>Bachelor of Science (BS) in Mechanical Engineering</i> Effective: December 1, 2020</p>	 <p align="center">WAYNE STATE UNIVERSITY</p>
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Students who follow this agreement and meet requirements will obtain the MTA and the Pre-Engineering: Mechanical/Industrial Associate of Applied Science degree, specific to the <i>Mechanical Pathway</i> , from HFC for maximum transferability to WSU. Failing to do so will require meeting Wayne State University General Education and Major requirements.					
Henry Ford College Michigan Transfer Agreement (MTA) Requirements Specific courses listed under MTA categories fulfill HFC program core or support courses and/or WSU General Education (GE) or WSU program requirements.					
Henry Ford College Courses		CREDIT HRS	Transfer to Wayne State University As		CREDIT HRS
Category One: 1 Course in English Composition					
*ENG 131	Introduction to College Writing	3	ENG 1020	English Composition I	3
Category Two: 1 Course in English Composition or Communication					
*ENG 135	Business & Technical Writing & Research	3	ENG 3050	Technical Writing	3
Category Three: 1 course in Mathematics					
*MATH 180	Calculus I	5	MAT 2010	Calculus I	5
Category Four: 2 courses in Social Sciences					
*BEC 151 Or BEC 152	Principles or Macroeconomics Principles of Microeconomics	3	ECO 2010 Or ECO 2020	Principles or Macroeconomics Principles of Microeconomics	3
Complete one course from approved MTA Category Four list		3	MTA - Social Science Course		3
Category Five: 2 courses in Humanities and Fine Arts					
Complete one course from approved MTA Category Five list		3	MTA - Humanities Course		3
Complete one course from approved MTA Category Five list		3	MTA - Humanities Course		3
Category Six: 2 courses in Natural Sciences from different disciplines (one lab required)					
CHEM 141	Principles of General & Inorganic Chemistry I	5	CHM 1225/1230	General Chemistry I for Engineers / General Chemistry I Laboratory	5
PHYS 231	Engineering Physics I	5	PHYS 2175	University Physics for Engineers I	5
Category Seven: General Education					
If needed, complete an additional course from any category to satisfy the 30 credit minimum for MTA			Transfer as Elective Credit (if needed)		
Total MTA Credits at HFC		33	WSU General Education Credits Transferred		33

*HFC required Pre-engineering Associate of Applied Science (AAS) support course.

See the HFC Associate of Applied Science in Pre-Engineering Mechanical/Industrial Degree Requirements on the following page

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HFC Associate of Applied Science Pre-Engineering: Mechanical/Industrial (Mechanical Pathway) Degree Requirements applied to WSU Bachelor of Science Mechanical Engineering Degree					
Henry Ford College			Wayne State University		
HFC Required Core Courses for Pre-Engineering: Mechanical/Industrial (Mechanical Pathway)		CREDIT HRS	Transfer to Wayne State University As		CREDIT HRS
CHEM 141	Principles of General & Inorganic Chemistry I	MTA	CHM 1225/1230	General Chemistry I for Engineers / General Chemistry I Laboratory	GE
CHEM 142	Principles of General & Inorganic Chemistry II	5	CHM 1080	Does not transfer toward WSU Mechanical Engineering Program	-
ENGR 121	Engineering Design & 3D Printing	3	BE 1200	Basic Engineering I: Design in Engineering	3
ENGR 125	Introduction to Computation for Engineers	3	BE 1500	Intro to Programming & Computation for Engineers	3
ENGR 201	Science of Materials (Lab BE 1310 to be taken at WSU)	3	BE 1300	Basic Engineering II: Materials Science for Engineering Applications	3
ENGR 232	Statics	3	ME 2410	Statics	3
ENGR 235	Mechanics of Materials	3	ME 2420	Elementary Mechanics of Materials	3
PHYS 231	Engineering Physics I	MTA	PHYS 2175	University Physics for Engineers I	GE
PHYS 232	Engineering Physics II	5	PHYS 2185	University Physics for Engineers I	5
MATH 180	Calculus I	MTA	MAT 2010	Calculus I	GE
MATH 183	Calculus II	5	MAT 2020	Calculus II	5
MATH 280	Calculus III	5	MAT 2030	Calculus III	5
MATH 288	Differential Equations	5	MAT 2150	Differential Equations & Matrix Algebra	5
ENGR 233	Dynamics (Mechanical Pathway required)	3	ME 3400	Dynamics	3
Total Required Pre-engineering Mechanical Pathway Credits at HFC		43	WSU Transferred		38
Total Pre-Engineering: Mechanical/Industrial (Mechanical Pathway) Credits at HFC		76	Credit Transferred to Wayne State University		71

See the Remaining WSU Bachelor of Science in Mechanical Engineering Degree Requirements on the following page

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Remaining Requirements taken at WSU for the Bachelor of Science in Mechanical Engineering		CREDIT HRS
*BE 1310	Materials Science for Engineering Laboratory	1
BE 2100	Basic Engineering III: Probability and Statistics in Engineering	3
ME 2500	Numerical Methods Using MATLAB	2
ME 2200	Thermodynamics	3
ECE 3300	Intro to Electrical Circuits	4
ME 3300	Fluid Mechanics: Theory and Lab	4
ME 3450	Manufacturing Processes I	3
ME 4210	Heat Transfer: Theory and Lab	4
ME 4150	Design of Machine Elements	4
ME 4410	Vibrations: Theory and Lab	4
PHI 1120	Professional Ethics	3
ENG 3060	Technical Communication II: Presentations	3
ME 4300	Thermal Fluid Systems Design	4
ME 4420	Dynamic Modeling and Control of Engineering Systems	4
ME	Technical Elective (ME 5XXX)	8
ME 4500	Mechanical Engineering Design II	4
Total Remaining Wayne State University Credit Hours		58
Total Wayne State University Bachelor of Science in Mechanical Engineering Credit Hours (min. 123 credits)		129

* BE 1310 Materials Science for Engineering Laboratory must be taken at WSU.

- Wayne State University will transfer a Maximum of 71 credits towards the minimum total of 123 semester hours needed for the Bachelor of Science in Mechanical Engineering degree. Courses must be approved for transfer, non-remedial and have a grade above a 2.0 ("C") or higher.
- Contact Henry Ford College [Advising](#) for questions regarding MTA at advising@hfcce.edu or 313-317-6845
- Contact Wayne State University for questions regarding the *Mechanical Engineering* Major, admission requirements or to set up an appointment with an advisor at <https://engineering.wayne.edu/students/advisors.php>