



EXHIBIT A - Articulation Guide
Henry Ford College
 Mechanical/Industrial Associate in Applied Science Degree
University of Michigan - Dearborn
Bachelor of Science in Engineering in Bioengineering
Effective: April 1, 2023 to March 31, 2028



RECOMMENDED COURSES BY MAJOR <i>Students need not complete all recommended coursework prior to transfer.</i>				
Henry Ford College Mechanical/Industrial Associate in Applied Science degree and University of Michigan Dearborn Bachelor of Engineering in Bioengineering				
Bioengineering	HFC Course / Title	UMD Equivalent	Meets DDC	UMD Major Requirement
GENERAL EDUCATION (29-30 credits)				
MTA ENGLISH COMP/COMMUNICATIONS (6 credits)	ENG 131: Introduction to College Writing ENG 135: Business and Technical Writing	COMP 105 COMP 270	✓ ✓	
MTA SOCIAL SCIENCE (6 credits)	BEC 151 or 152 Behavioral and Social Sciences Course	ECON 201 or ECON 202 Behavioral and Social Sciences Course	✓ ✓	
MTA HUMANITIES & FINE ARTS (6 credits)	Humanities and Arts Course Humanities and Arts Course	Humanities and Arts Course Humanities and Arts Course	✓ ✓	
MTA MATHEMATICS (3-4 credits)	MATH 180: Calculus I	MATH 115	✓	
MTA NATURAL SCIENCES (7-8 credits, course with lab)	CHEM 141: Prin of Gen & Inorganic Chem I PHYS 231: Engineering Physics I	CHEM 134 PHYS 150	✓ ✓	
Total MTA Credits		33		
COLLEGE DEGREE REQUIREMENT				
REQUIRED COURSES	MATH 183: Calculus II MATH 280: Calculus III MATH 288: Diff Eq + Linear	Math 116 Math 215 Math 228		✓ ✓ ✓
REQUIRED COURSES	CHEM 142: General Chemistry II PHYS 232: Engineering Physics II	CHEM 136 PHYS 151		✓ ✓
REQUIRED COURSES	ENGR 130: Intro to Engr. and ENGR 125: Intro to Computation for Engr. ENGR 121: Engr. Design and 3D printing or Draf 120: Intro to CAD ENGR 201: Science of Materials ENGR 232: Statics and ENGR 235: Mechanics of Materials and ENGR 233: Dynamics	ENGR 100 ENGR 126 ENGR 250 ME 265		✓ ✓ ✓ ✓
*Additional elective course will be met at UMD from HFC Associate Degree Credits.				
Total Degree Credits		37		
Total Associates Degree Credits		70		



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COURSES TO BE TAKEN AT UMD

Requirement Description	UMD Course / Title	Credit Hours	Meets DDC	UMD Major
PRE MAJOR REQUIREMENT				
REQUIRED COURSES	BIO 140: Intro Molec & Cellular Biology	4		✓
	ME 230: Thermodynamics	4		
	ENGR 216: Computer Methods	2		
	BENG 200: Anat and Phys for Engr.	4		
TOTAL PRE-MAJOR CREDITS		14		
MAJOR REQUIREMENT				
CORE COURSES	ECE 305: Intro to Electr.	4		✓
	BENG 325: Fluid Mech for BENG	4		
	BENG 351: Bio-sensors	4		
	BENG 364: Prob and Stat in BENG	3		
	BENG 370: Biomechanics	4		
	BENG 375: Biomaterials	4		
	BENG 381: Bioprocessing	4		
	BENG 4671: Senior Design	4		
	BENG Elective	3-4		
	BENG Elective	3-4		
	BENG Elective	3-4		
	Design Elective	3-4		
	Elective	3-4		
	Elective	3-4		
Total Core Course Credits		49-55		
Total Credits to be Taken at UMD		63- 69		