A.S. in General Engineering

B.S. in Cyber-Physical Systems Engineering

CREDITS	MONTGOMERY COLLEGE Requirements for Associate's Degree		TRANSFER INSTITUTION Requirements for Bachelor's Degree
3	ENGL101 College Writing* (if needed for ENGL102, if not t)		Lower-Level Elective
3	ENES100 Intro to Engineering Design (GEEL)		ENES100
4	MATH181 Calculus I		MATH140
4	CHEM 131 Principles of Chemistry I		CHEM131 & 132
3	Humanities Distribution		
3	ENGL102 Critical Reading, Writing and Research		ENGL101
4	MATH182 Calculus II		MATH141
3	PHYS161 General Physics I: Mechanics and Heat		PHYS161
3	Behavioral and Social Sciences Distribution *		
4	CHEM 132 Principles of Chemistry II		CHEM271
4	MATH280 Multivariable Calculus		MATH241
4	PHYS262 Physics II: Electricity and Magnetism		PHYS260 & 261
3	Behavioral and Social Sciences Distribution *		
3	ENES/ENEE Electives		
3	MATH282 Differential Equations		MATH246
4	PHYS263 Physics III: Waves, Optics, Modern Physics		PHYS270 &271
3	Arts Distribution		
3-4	CMSC140 Introduction to Programming or CMSC203 Computer Science I		Lower-Level Elective or CMSC131
3	ENES/ENEE Elective		
62-63	TOTAL CREDITS TRANSFERRED		

REMAINING UMD DEGREE REQUIREMENTS - RECOMMENDED SEQUENCE UPON TRANSFER WITH ASSOCIATE'S DEGREE	
ENEB302 Analog Circuits	4
ENEB340 Intermediate Programming Concepts and Applications for Embedded Systems (C/C++)	3
ENEB341 Introduction to Internet of Things	3
ENEB344 Introduction to Digital Circuits	4
ENEB354 Discrete Mathematics for Information Technology	3
ENEB304 Microelectronics and Sensors	3
ENEB352 Introduction to Networks and Protocols	3
ENEB353 Computer Organization for Embedded Systems	3
ENEB355 Algorithms in Python	3
ENEB345 Probability & Statistical Inference	3
ENEB408A Capstone Design Lab I	3
ENEB454 Embedded Systems	3
ENEB444 Operating Systems for Embedded Systems	3
ENEB346 Linear Algebra for Machine Learning Applications	3
ENGL3** Professional Writing	3
ENEB408B Capstone Design Lab II	3
ENEB4XX Senior General Elective	3
ENEB4XX Senior General Elective	3
ENEB4XX Senior General Elective	3
ENEB4XX Senior General Elective	3
TOTAL CREDITS REMAINING AT UNIVERSITY OF MARYLAND	62

MONTGOMERY COLLEGE NOTES

*If needed for ENGL102. If not, becomes Elective.

** BSSD courses must come from different disciplines.

† MATH 165 if needed for MATH 181 or any course from the following disciplines: ENEE, ENES, PHYS, CMSC, CHEM, BIOL, GEOL.

UNIVERSITY OF MARYLAND NOTES

Students in the Embedded Systems major will take the program required courses in their junior and senior years, in addition to general elective coursework in the second semester of their senior year. The specific elective course offerings will vary each spring semester.

Elective courses are: ENEB443, ENEB451, ENEB452, ENEB453, ENEB455, ENEB456, and ENEB457