Montgomery College — A.S. in General Engineering

University of Maryland — B.S. in Biocomputational Engineering

CATALOG YEAR: 2025-26

CREDITS	MONTGOMERY COLLEGE Requirements for Associate's Degree		UNIVERSITY OF MARYLAND Requirements for Bachelor's Degree
3	ENGL102 Critical Reading, Writing and Research		ENGL 101
4	MATH 181 Calculus I (MATF) †		MATH 140
4	CHEM 131 - Principles of Chemistry I (NSLD)		CHEM 131/132
3	ENES100 Intro to Engineering Design (GEEL)		ENES 100
4	MATH 182 - Calculus II		MATH 141
4	CHEM 132 - Principles of Chemistry II (NSLD)		CHEM 271
4	PHYS161 General Physics I: Mechanics and Heat		PHYS 161
3	ENES120 Biology for Engineers (or BIOL150)		BIOE 120 or BIOL 170/171
3	Behavioral and Social Sciences Distribution (BSSD)*		
4	MATH280 Multivariable Calculus		MATH 241
4	PHYS262 Physics II: Electricity and Magnetism		PHYS 260/261
5	Program Elective		
3	Arts Distribution (ARTD)		
3	MATH282 Differential Equations		MATH 246
4	PHYS263 or Program Elective		PHYS 270/271
3	ENES240 Scientific and Engineering Computation		ENCE 201
3	Behavioral and Social Sciences Distribution (BSSD)*		
3	Humanities Distribution (HUMD)		
63	TOTAL CREDITS TRANSFERRED		

REMAINING UNIVERSITY OF MARYLAND DEGREE REQUIREMENTS RECOMMENDED SEQUENCE UPON TRANSFER WITH ASSOCIATE'S DEGREE	
ENBC301 Intro to Biocomputational Engineering	1
ENBC311 Python for Data Analysis	3
ENBC331 Applied Linear Systems and Differential Equations	3
ENBC332 Statistics, Data Analysis, and Data Visualization	3
ENBC341 Biomolecular Engineering Thermodynamics	3
ENBC322 Algorithms	3
ENBC312 Object Oriented Programming in C++	3
ENBC351 Quantitative Molecular and Cellular Biology	3
ENBC342 Computational Fluid Dynamics and Mass Transfer	3
ENBC352 Molecular Techniques Laboratory	2
ENBC321 Machine Learning for Data Analysis	3
ENBC353 Synthetic Biology	3
ENBC425 Imaging and Image Processing	3
ENGL393 Technical Writing	3
ENBC431 Finite Element Analysis	3
ENBC423 Applied Computer Vision	3
ENBC403 Research Methods in Biological Data Mining ENBC441 Computational Systems Biology	3
ENBC441 Computational Systems Biology	3
ENBC491 Senior Capstone Design in Biocomputational Engineering	3
ENBC455 Bioinformatics Engineering	3
ENBC 4xx Major Elective	3
TOTAL CREDITS REMAINING AT UNIVERSITY OF MARYLAND	60

MONTGOMERY COLLEGE NOTES

* BSSD courses must come from different disciplines

† MATH 165 if needed for MATH 181

UNIVERSITY OF MARYLAND NOTES

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