UMBC AN HONORS UNIVERSITY IN MARYLAND	B.S. Computer Engineering – Electronic Systems Track	Academic Pathway	2017-2018

Degree Requirements	Curriculum Notes
Total Credits: 125 **Major Credits:** 97 **Minimum Cumulative GPA:** 2.0 **Minimum Major GPA:** 2.0	• This plan assumes no AP/IB/CLEP or transfer credit and foreign language proficiency up to the 201 level • **This major can provide all upper-level (300 or 400) credits toward the 45-total needed to earn a UMBC degree.** • Gateway information http://advising.coeit.umbc.edu/gateway-information/cmpe-gateway/ • Unless designated, electives can be taken within or outside of the major For complete information on degree requirements, reference the Undergraduate Course Catalog (**catalog.umbc.edu**). Your personal program of study may vary.

	FALL SEMESTER		SPRING SEMESTER	
Freshman	**Course**	**Credits**	**Course**	**Credits**
	CMSC 201 Computer Science I for Majors	4	CMSC 202 Computer Science II for Majors	4
	PHYS 121 Introductory Physics I	4	MATH 152 Calculus & Analytic Geometry II	4
	MATH 151 (MATH GEP) Calculus & Analytic Geometry I	4	CMPE 212 Principles of Digital Design	4
	ENGL 100/110	3	ENES 101 Introduction to Engineering	3
	Total:	15	**Total:**	15
Sophomore	**Course**	**Credits**	**Course**	**Credits**
	AH GEP	3	CMPE 306 Introductory Circuit Theory (Lab)	4
	AH GEP	3	MATH 225 Introduction to Differential Equations	3
	MATH 251 Multivariable Calculus	4	CMPE 310 Systems Design & Programming	4
	PHYS 122 Introductory Physics II	4	CMSC 341 Data Structures	3
	CMSC 203 Discrete Structures	3		
	Total:	17	**Total:**	14
Junior	**Course**	**Credits**	**Course**	**Credits**
	AH GEP	3	CMPE 320 Probability, Statistics & Random Processes	3
	Science Elective (Major)	4	CMSC 421 Principles of Operating Systems	3
	CMPE 314 Principles of Electronic Circuits	4	CMPE 415 FPGA Arch.&Applications	3
	CMPE 311 C Programming & Embedded Systems	3	CMPE 349 Intro. to Prof. Practice, WI	2
	MATH 221 Linear Algebra	3	SS GEP	3
			Physical Education (not included in the total credits for graduation)	1.5
	Total:	17	**Total:**	15.5
Senior	**Course**	**Credits**	**Course**	**Credits**
	CMPE 315 Principles of VLSI Design	4	CMPE 451 Capstone II	2
	CMSC 411 Computer Architecture	3	CMPE Elective List A	3
	CMPE 450 Capstone I	2	CMPE Elective List A or B	3
	CMPE Elective List A	3	Foreign Language 201	4
	SS GEP	3	C GEP	3
	SS GEP	3	Physical Education (not included in the total credits for graduation)	1.5
	Total:	18	**Total:**	16.5

Advising Coordinator: COEIT Advising 410-455-3096 ITE Building, Room 202-206

Updated 4/17

UMBC AN HONORS UNIVERSITY IN MARYLAND	B.S. Computer Engineering – Communications Track	Academic Pathway	2017-2018

Degree Requirements	Curriculum Notes
Total Credits: 125 **Major Credits:** 97 **Minimum Cumulative GPA:** 2.0 **Minimum Major GPA:** 2.0	• This plan assumes no AP/IB/CLEP or transfer credit and foreign language proficiency up to the 201 level • **This major can provide all upper-level (300 or 400) credits toward the 45-total needed to earn a UMBC degree.** • **Gateway information http://advising.coeit.umbc.edu/gateway-information/cmpe-gateway/** • Unless designated, electives can be taken within or outside of the major For complete information on degree requirements, reference the Undergraduate Course Catalog (**catalog.umbc.edu**). Your personal program of study may vary.

	FALL SEMESTER		SPRING SEMESTER	
Freshman	**Course**	**Credits**	**Course**	**Credits**
	CMSC 201 Computer Science I for Majors	4	CMSC 202 Computer Science II	4
	MATH 151 Calculus & Analytic Geometry I	4	MATH 152 Calculus & Analytic Geometry II	4
	PHYS 121 Introductory Physics I	4	CMPE 212 Prin. Of Digital Design	4
	ENGL 100/110 Composition	3	ENES 101 Introduction to Engineering	3
	Total:	15	**Total:**	15
Sophomore	**Course**	**Credits**	**Course**	**Credits**
	AH GEP	3	CMPE 306 Basic Circuit Theory (Lab)	4
	AH GEP	3	MATH 225 Introduction to Differential Equations	3
	MATH 251 Multivariable Calculus	4	CMPE 310 Systems Design and Prog.	4
	PHYS 122 Introductory Physics II	4	CMSC 341 Data Structures	3
	CMSC 203 Discrete Structures	3		
	Total:	17	**Total:**	14
Junior	**Course**	**Credits**	**Course**	**Credits**
	Science Elective (Major)	4	AH GEP	3
	MATH 221 Linear Algebra	3	C GEP	3
	CMPE 314 Electronic Circuits	4	CMPE 320 Prob. & Random Processes	3
	CMPE 311 C Prog. & Embedded Systems	3	CMPE 330 Wave and Signal Transmission	3
	CMPE 323 Signals and Systems	4	CMPE 349 Intro. to Prof. Practice, WI	3
			Physical Education (not included in the total credits for graduation)	1.5
	Total:	18	**Total:**	16.5
Senior	**Course**	**Credits**	**Course**	**Credits**
	SS GEP	3	SS GEP	3
	SS GEP	3	Language 201 GEP	4
	CMSC 411 Computer Architecture	3	CMSC421 Operating Systems	3
	CMPE 450 Capstone I	2	CMPE 451 Capstone II	2
	CMPE Elective List A	3	CMPE Elective List A/B	3
	CMPE Elective List A	3	Physical Education (not included in the total credits for graduation)	1.5
	Total:	17	**Total:**	16.5

Advising Coordinator: COEIT Advising 410-455-3096 ITE Building, Room 202-206

Updated 4/17

UMBC AN HONORS UNIVERSITY IN MARYLAND	B.S. Computer Engineering – Cybersecurity Track	Academic Pathway	2017-2018

Degree Requirements	Curriculum Notes
Total Credits: 125 **Major Credits:** 97 **Minimum Cumulative GPA:** 2.0 **Minimum Major GPA:** 2.0	• This plan assumes no AP/IB/CLEP or transfer credit and foreign language proficiency up to the 201 level • **This major can provide all upper-level (300 or 400) credits toward the 45-total needed to earn a UMBC degree.** • Gateway information http://advising.coeit.umbc.edu/gateway-information/cmpe-gateway/ • Unless designated, electives can be taken within or outside of the major For complete information on degree requirements, reference the Undergraduate Course Catalog (**catalog.umbc.edu**). Your personal program of study may vary.

	FALL SEMESTER		SPRING SEMESTER	
Freshman	**Course**	**Credits**	**Course**	**Credits**
	CMSC 201 Computer Science I for Majors	4	CMSC 202 Computer Science II for Majors	4
	PHYS 121 Introductory Physics I	4	MATH 152 Calculus & Analytic Geometry II	4
	MATH 151 (MATH GEP) Calculus & Analytic Geometry I	4	CMPE 212 Principles of Digital Design	4
	ENGL 100/110 Composition	3	ENES 101 Introduction to Engineering	3
	Total:	15	**Total:**	15
Sophomore	**Course**	**Credits**	**Course**	**Credits**
	AH GEP	3	CMPE 306 Introductory Circuit Theory (Lab)	4
	AH GEP	3	MATH 225 Introduction to Differential Equations	3
	MATH 251 Multivariable Calculus	4	CMPE 310 Systems Design & Programming	4
	PHYS 122 Introductory Physics II	4	CMSC 341 Data Structures	3
	CMSC 203 Discrete Structures	3		
	Total:	17	**Total:**	14
Junior	**Course**	**Credits**	**Course**	**Credits**
	AH GEP	3	CMPE 320 Probability, Statistics & Random Processes	3
	Science Elective (Major)	4	CMSC 421 Principles of Operating Systems	3
	CMPE 314 Principles of Electronic Circuits	4	CMPE 415 FPGA Arch &Applications	3
	CMPE 311 C Programming & Embedded Systems	3	CMPE 349 Intro. to Prof. Practice, WI	2
	MATH 221 Linear Algebra	3	SS GEP	3
			Physical Education (not included in the total credits for graduation)	1.5
	Total:	17	**Total:**	15.5
Senior	**Course**	**Credits**	**Course**	**Credits**
	CMPE 315 Principles of VLSI Design	4	CMPE 451 Capstone II	2
	CMSC 411 Computer Architecture	3	Cyber Elective List C –See advisor	3
	CMPE 450 Capstone I	2	Foreign Language 201	4
	CMSC 426 Principles of Computer Security	3	C GEP	3
	SS GEP	3	CMSC 481 Computer Networks	3
	SS GEP	3	Physical Education (not included in the total credits for graduation)	1.5
	Total:	18	**Total:**	16.5

Advising Coordinator: COEIT Advising 410-455-3096 ITE Building, Room 202-206

Updated 4/17