



BACHELOR OF SCIENCE IN COMPUTER ENGINEERING AND ELECTRICAL ENGINEERING

FRESHMAN YEAR

First Semester			R	L	C	Second Semester			R	L	C		
ENL	101	Critical Writing & Reading I	3	0	3	ENL	102	Critical Writing & Reading II	3	0	3		
EGR	111	Intro. Engineering & Computing ¹	3	2	3	ECE	250	Fundamentals of MATLAB	1	2	2		
ECE	160	Foundations Comp. Engineering I	3	2	4	ECE	264	Object Oriented Software Devel.	3	2	4		
MTH	153	Calculus Applied Science & Eng. I ²	4	0	4	MTH	154	Calculus Applied Science & Eng. II	4	0	4		
		University Studies Elective ³	3	0	3	PHY	113	Physics for Science & Eng. I ⁴	3½	1½	4		
						17							17

SOPHOMORE YEAR

First Semester			R	L	C	Second Semester			R	L	C		
ECE	201	Circuit Theory I	3	1½	3½	ENL	266	Technical Communications ⁵	3	0	3		
ECE	256	Foundations of Cybersecurity	2	3	3	ECE	161	Foundations Comp. Engineering II	3	2	4		
ECE	260	Digital Logic & Computer Design	3	1½	3½	ECE	202	Circuit Theory II	3	1½	3½		
MTH	213	Calculus Applied Science & Eng. III	4	0	4	ECE	263	Embedded System Design	3	1½	3½		
PHY	114	Physics for Science & Eng. II	3½	1½	4	MTH	212	Differential Equations	3	0	3		
						18							17

JUNIOR YEAR

First Semester			R	L	C	Second Semester			R	L	C					
ECE	370	Design/Impl. RT Embedded RMS	2	3	3	ECE	310	Engineering Ethics	1	0	1					
ECE	311	Digital Electronics	3	3	4	ECE	312	Analog Electronics	3	3	4					
ECE	320	Discrete-Time Linear Systems	3	0	3	ECE	321	Continuous-Time Linear Systems	3	0	3					
ECE	388	Embedded System Design Project	2	3	3	ECE	368	Digital Design	2	3	3					
		Science Elective ⁶	3	0	3	ECE	384	Random Signals and Noise	3	0	3					
						16				ECE	355	Applied Discrete Structures	3	0	3	17

SENIOR YEAR

First Semester			R	L	C	Second Semester			R	L	C		
ECE	335	Electromagnetic Theory I	3	0	3	ECE	336	Electromagnetic Theory II	3	0	3		
ECE	457	Design Project I ⁷	3	0	3	ECE	458	Design Project II ⁸	3	0	3		
ECE	471	Communication Theory	3	0	3	ECE	369	Computer Networks	3	0	3		
		Technical Elective ⁹	3	0	3			Technical Elective ⁹	3	0	3		
EGR	303	Engineering Economics ¹⁰	3	0	3			University Studies Elective ³	3	0	3		
						15							15

...plus 9 additional credits: Science Elective⁶ and 2 University Studies courses³.

TOTAL CREDITS = 141

R = Recitation (hours)

L = Laboratory (hours)

C = Number of Credits

¹ This course meets the University Studies Cluster 1E requirement: Foundation for Learning through Engagement.

² This course meets the University Studies Cluster 1D requirement: Mathematics.

³ See University Studies requirements (Clusters 3A, 4A, and 4B).

⁴ This course meets the University Studies Cluster 2A requirement: Science of the Natural World.

⁵ This course meets the University Studies Cluster 1C requirement: Intermediate Writing.

⁶ Must be chosen from this list: BIO, BNG, CHM, MAR, or MLS course; or a PHY course numbered above 150. One of the courses must come from the University Studies cluster 2B (Science in the Engaged Community) approved list (www.umassd.edu/universitystudies/approvedcourses/). Requirement may not be satisfied by independent study, seminars or internships.

⁷ This course meets the University Studies Cluster 5B requirement: Learning through Engagement.

⁸ This course meets the University Studies Cluster 5A requirement: Capstone Study.

⁹ Must be taken from approved list of courses.

¹⁰ This course meets the University Studies Cluster 4C requirement: The Nature of the Global Society.