



## 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 <sup>1</sup>		3	2	3	ECE	250	Fundamentals of MATLAB		1	2	2
ECE	160	Foundations Comp. Engineering I		3	2	4	MTH	154	Calculus Applied Science & Eng. II		4	0	4
MTH	153	Calculus Applied Science & Eng. I <sup>2</sup>		4	0	4	PHY	111	Physics for Science & Eng. I <sup>3</sup>		3½	1½	4
		University Studies Elective <sup>4</sup>		3	0	3	ECE	161	Foundations Comp. Engineering II		3	2	4
				<b>17</b>							<b>17</b>		

## SOPHOMORE YEAR

First Semester				R	L	C	Second Semester				R	L	C
ECE	201	Circuit Theory I		3	1½	3½	ENL	266	Technical Communications <sup>5</sup>		3	0	3
ECE	257	Fund. System Software w/ UNIX		2	0	2	ECE	202	Circuit Theory II		3	1½	3½
ECE	260	Digital Logic & Computer Design		3	1½	3½	ECE	263	Embedded System Design		3	1½	3½
MTH	213	Calculus Applied Science & Eng. III		4	0	4	ECE	264	Object Oriented Software Develop.		3	2	4
PHY	112	Physics for Science & Eng. II		3½	1½	4	MTH	212	Differential Equations		3	0	3
				<b>17</b>							<b>17</b>		

## JUNIOR YEAR

First Semester				R	L	C	Second Semester				R	L	C
CIS	370	Design of Operating Systems		3	2	4	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 Design Project		2	3	3	ECE	368	Digital Design		2	3	3
ECE	355	Applied Discrete Structures		3	0	3	ECE	369	Computer Networks		3	0	3
				<b>17</b>							<b>17</b>		

## SENIOR YEAR

First Semester				R	L	C	Second Semester				R	L	C
CIS	360	Algorithms and Data Structures		3	0	3	ECE	336	Electromagnetic Theory II		3	0	3
ECE	335	Electromagnetic Theory I		3	0	3	ECE	458	Design Project II <sup>6</sup>		1	6	3
ECE	457	Design Project I <sup>7</sup>		2	3	3	ECE	460	Computer Systems Perform. Eval.		3	0	3
ECE	471	Communication Theory		3	0	3			Technical Elective <sup>8</sup>		3	0	3
		University Studies Elective <sup>4</sup>		3	0	3			University Studies Elective <sup>4</sup>		3	0	3
				<b>15</b>							<b>15</b>		

...plus 12 additional credits: 2 Science Electives<sup>9</sup> and 2 University Studies courses<sup>4</sup>.

**TOTAL CREDITS = 144**

R = Recitation (hours)

L = Laboratory (hours)

C = Number of Credits

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

<sup>2</sup> This course meets the University Studies Cluster 1D requirement: Mathematics.

<sup>3</sup> This course meets the University Studies Cluster 2A requirement: Science of the Natural World.

<sup>4</sup> See University Studies requirements (Clusters 3 and 4).

<sup>5</sup> This course meets the University Studies Cluster 1C requirement: Intermediate Writing.

<sup>6</sup> This course meets the University Studies Cluster 5A requirement: Capstone Study.

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

<sup>8</sup> Must be taken from approved list of 400-level courses.

<sup>9</sup> Must be chosen from this list: BIO, BNG, CHM, 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/](http://www.umassd.edu/universitystudies/approvedcourses/)).

Requirement may not be satisfied by independent study, seminars or internships.