

**DUAL COMPUTER & ELECTRICAL ENGINEERING PROGRAM****FRESHMAN YEAR**

<u>First Semester</u>			<u>R</u>	<u>L</u>	<u>C</u>	<u>Second Semester</u>			<u>R</u>	<u>L</u>	<u>C</u>		
ENL	101	Critical Writing & Reading I	3	0	3	ENL	102	Critical Writing & Reading II	3	0	3		
EGR	101	Intro. Engineering Applied Science I <sup>1</sup>	1½	1½	2	EGR	102	Intro. Engineering App. Science II	1½	1½	2		
MTH	113	Calculus Applied Science & Eng. I <sup>2</sup>	4	0	4	MTH	114	Calculus Applied Science & Eng. II	4	0	4		
		University Studies Elective <sup>3</sup>	3	0	3	PHY	111	Physics for Science & Eng. I <sup>4</sup>	3½	1½	4		
ECE	160	Foundations Comp. Engineering I	3	2	4	ECE	161	Foundations Comp. Engineering II	3	2	4		
						<b>16</b>							<b>17</b>

**SOPHOMORE YEAR**

<u>First Semester</u>			<u>R</u>	<u>L</u>	<u>C</u>	<u>Second Semester</u>			<u>R</u>	<u>L</u>	<u>C</u>		
ECE	201	Circuit Theory I	3	1½	3½	ECE	202	Circuit Theory II	3	1½	3½		
ECE	257	Fund. System Software w/ UNIX	2	0	2	ECE	250	Fundamentals of MATLAB	½	1½	1		
ECE	260	Digital Logic & Computer Design	3	1½	3½	ECE	263	Embedded System Design	3	1½	3½		
PHY	112	Physics for Science & Eng. II	3½	1½	4	ECE	264	Object Oriented Software Develop.	3	2	4		
MTH	213	Calculus Applied Science & Eng. III	4	0	4	MTH	212	Differential Equations	3	0	3		
							ENL	266	Technical Communications <sup>5</sup>	3	0	3	
						<b>17</b>							<b>18</b>

**JUNIOR YEAR**

<u>First Semester</u>			<u>R</u>	<u>L</u>	<u>C</u>	<u>Second Semester</u>			<u>R</u>	<u>L</u>	<u>C</u>		
ECE	311	Digital Electronics	3	3	4	ECE	310	Engineering Ethics	1	0	1		
ECE	320	Discrete-Time Linear Systems	3	0	3	ECE	312	Analog Electronics	3	3	4		
ECE	388	Embedded Design Project	2	3	3	ECE	321	Continuous-Time Linear Systems	3	0	3		
CIS	370	Design of Operating Systems	3	2	4	ECE	368	Digital Design	2	3	3		
ECE	355	Applied Discrete Structures	3	0	3	ECE	369	Computer Networks	3	0	3		
							ECE	384	Random Signals and Noise	3	0	3	
						<b>17</b>							<b>17</b>

**SENIOR YEAR**

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

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

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

<sup>6</sup> This course meets the University Studies Cluster 5B requirement: Learning through Engagement.

<sup>7</sup> This course meets the University Studies Cluster 5A requirement: Capstone Study.

<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.