

# Prescribed schedule for students in the Maine Engineering Pathways Program

## to BS in USM Electrical Engineering from UMA

### Year One @ UMA

Year One Fall		Year One Spring	
Course	Credit	Course	Credit
UMM Introduction to Engineering	1	<a href="#">Any course that fulfills USM Cultural Interpretation Core Requirement</a>	3
ENG 101 College Composition	3	MAT 126 Analytic Geometry & Calculus II	4
MAT 125 Calculus I (Quantitative Reasoning Core Requirement)	4	<a href="#">Any course that fulfills USM Creative Expression Core Requirement</a>	3
CHY 115 General Chemistry I (Science Exploration Core Requirement)	4	CIS 215 Intro to C++ Programming	3
PHY 121 General Physics I	4	<a href="#">Any course that fulfills USM Socio-Cultural Analysis Core Requirement</a>	3
<b>Semester Credits</b>	<b>16</b>	<b>Semester Credits</b>	<b>16</b>
<b>Total UMA Credits: 32</b>			

### Years Two through Four Electrical Engineering @ USM

Year Two Fall		Year Two Spring	
Course	Credit	Course	Credit
ELE 216 Circuits 1: Steady-State Analysis	3	ELE 217/219 Circuits 2: System Dynamics/Lab	4
MAT 252 Calculus C	4	EGN 248 Intro to Differential Equations and Linear Algebra	4
ELE 172 Digital Logic	4	MAT 380 Theory of Probability and Statistics	3
PHY 123/116 General Physics II/Lab	4	ELE 271 Microprocessor Systems	4
EGN 160 Introduction to Programming: C++ or Java	4		
<b>Semester Credits</b>	<b>19</b>	<b>Semester Credits</b>	<b>15</b>

Year Three Fall		Year Three Spring	
Course	Credit	Course	Credit
ELE 323 Electromechanical Energy Conversion	3	ITP 210 Technical Writing (WRI 3 Core Requirement)	3
EGN 260 Materials Science for Engineers	3	EGN 304 Engineering Economics	3
ELE 314 Linear Signals and Systems	3	Culture, Power, and Equity Core Requirement	3
ELE 342 Electronics 1: Devices and Circuits	4	Ethical Inquiry Core Requirement	3
WRI 2 Core Requirement	3	300+ level Engineering Elective	3
<b>Semester Credits</b>	<b>16</b>	<b>Semester Credits</b>	<b>15</b>

Year Four Fall		Year Four Spring	
Course	Credit	Course	Credit
Engineering Elective 300-level+	3	Engineering Elective 300-level+	3
International Core Requirement	3	Engineering Elective 300-level+	3
Engineering Elective 300-level+	3	EGN 402 Senior Design Project (Engaged Learning Core Requirement)	3
ELE 351 Electromagnetic Fields	3	ELE 486/489 Digital Signal Processing/Lab	4
EGN 401 Senior Design Project I and the Engineering Profession	3	EGN 325/329 Control Systems/Lab	4
<b>Semester Credits</b>	<b>15</b>	<b>Semester Credits</b>	<b>17</b>
<b>Total USM credits: 97</b>			
<b>Total UMA and USM credits: 129</b>			

**In order to transfer to USM, students must successfully complete a minimum of 30 credits at a participating campus (UMPI, UMF, UMA, UMM).** They should have earned a C or better in core mathematics and science courses. Transfer students missing one or more of these core courses will be considered on a case-by-case basis. The minimum overall GPA requirement to transfer into a USM engineering program is 2.5.

**Admissions and High School Curriculum expectations:** Suggested minimum admissions requirements are combined SAT (Math + Verbal) of 1000, and a Math SAT score of 550. A high school GPA of 2.5 or greater is recommended. Applicants should have completed two years of high school lab sciences and three years of mathematics including Algebra I, Algebra II, and Geometry. In addition, a year of Pre-Calculus is required. If the latter requirement is not met, students would likely need to take Pre-Calculus in the first semester of the MEPP rather than Calculus I. This could delay student's overall progress by up to one year.

**Students already matriculated at UMA, UMF, UMPI, or UMM:** Students who are already enrolled in one of the participating campuses and wish to change majors into the program may do so provided they earn a C or better in Pre-Calculus and a lab science course, and have an overall college GPA of 2.0 or greater.