

Prescribed schedule for students in the Maine Engineering Pathways Program

USM Electrical Engineering

Year One @ UMF

Year One Fall		Year One Spring	
Course	Credit	Course	Credit
UMF Equivalent to USM Entry Year Experience (EYE 112) -- in development	1	Any course that fulfills USM Cultural Interpretation Core Requirement	3
ENG 100 Writing Seminar	3	MAT 142 Calculus II	4
MAT 141M Calculus I (Quantitative Reasoning Core Requirement)	4	PHY 142 General Physics II	4
CHY 141 General Chemistry I (Science Exploration Core Requirement)	4	COS 140 Intro to Computer Science	3
PHY 141 General Physics I	4	Any course that fulfills USM Socio-Cultural Analysis Core Requirement	3
Semester Credits	16	Semester Credits	17
Total UMF credits: 33			

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 2 (Cluster Core Requirement 1 of 3)	4	EGN 248 Intro to Differential Equations and Linear Algebra	4
ELE 172 Digital Logic	4	MAT 380 Theory of Probability and Statistics (Cluster Core Requirement 2 of 3)	3
THE 170 Public Speaking (Creative Expression Core Requirement)	3	ELE 271 Microprocessor Systems	4
		ITP 210 Technical Writing (Cluster Core Requirement 3 of 3)	3
Semester Credits	14	Semester Credits	18

Year Three Fall		Year Three Spring	
Course	Credit	Course	Credit
ELE 323 Electromechanical Energy Conversion	3	EGN 301 Junior Design Project	3
EGN 260 Materials Science for Engineers	3	EGN 304 Engineering Economics	3
ELE 314 Linear Signals and Systems	3	Diversity Core Requirement	3
ELE 342 Electronics 1: Devices and Circuits	4	ELE 343 Electronics 2: Electronic Design	4
Ethical Inquiry Core Requirement	3	Engineering Elective 300-level+	3
Semester Credits	16	Semester Credits	16

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
ELE 351 Electromagnetic Fields	3	EGN 402 Senior Design Project	3
Engineering Elective 300-level+	3	EGN 325/329 Control Systems/Lab	4
		ELE 486/489 Digital Signal Processing/Lab	4
Semester Credits	12	Semester Credits	17
Total USM credits: 96			
Total UMF and USM credits: 126			

In order to transfer to UM or 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 UM or USM engineering program is 2.5; students with a cumulative GPA greater than 20 may transfer into one of UM's four engineering technology programs.

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.