

Name:

Key:

Done
In Progress
Possible based on prerequisites

2016-2017 Electrical Engineering Curriculum

This chart was prepared by Freshman Engineering using the 2016-2017 catalog. It is designed to assist in advising and course selection; refer to the student's catalog requirement year for official requirements and to the student's degree audit for official progress.

Prerequisites	FEP		Math	1103	Fundamentals of Algebra	Prerequisite: Entrance requirements.	3	
	FEP		Math	1120	College Algebra	Prerequisite: By placement examination.	5	
	FEP		Math	1140	College Algebra	Prerequisite: By placement examination.	3	
	FEP		Math	1160	Trigonometry	Prerequisite: Math 1120 or 1140 with a grade of "C" or better; or by placement exam.	2	
	FEP		Chem	1100	Introduction to Laboratory Safety & Hazardous Materials		1	
Semester 1	FEP		Fr Eng	1100	Study & Careers in Engineering		1	
	FEP		Chem	1310	General Chemistry I	Prerequisite: Entrance requirements.	4	
	FEP		Chem	1319	General Chemistry Laboratory	Prerequisite: Preceded or accompanied by both Chem 1310 and Chem 1100.	1	
	FEP		Math	1214	Calculus for Engineers I	Prerequisites: A grade of "C" or better in both Math 1160 and one of Math 1120 or Math 1140; or by placement exam.	4	
	FEP	<i>Hum/Soc Sci Elective - History</i>	History/Pol Sci	one of these	1. History 1200 Modern Western Civilization 2. History 1300 American History to 1877 3. History 1310 American History Since 1877 4. Pol Sci 1200 American Government		3	
	FEP	<i>Hum/Soc Sci Requirement-English</i>	English	1120	Exposition and Argumentation		3	

Semester 2	FEP		Mech Eng	1720	Introduction to Engineering Design		3	
	FEP		Math	1215	Calculus for Engineers II	Prerequisites: Math 1160 and either Math 1208 or Math 1214 both with a grade of "C" or better; or by placement exam.	4	
	FEP		Physics	various	1. Physics 1135 Engineering Physics I or 2. Physics 1111 General Physics and 2a. Physics 1119 General Physics Laboratory	1. Prerequisite: Math 1208 or 1214. 2. Prerequisite: Preceded by Math 1208 or Math 1214. 2a. Prerequisite: Preceded or accompanied by either Physics 1111 or Physics 1145.	4	
	FEP	<i>Hum/Soc Sci Elective - Econ</i>	Econ	one of these	1. Econ 1100 Principles of Microeconomics 2. Econ 1200 Principles of Macroeconomics		3	
		<i>Hum/Soc Sci Elective</i>	various	one of these	<i>(FEP) Course chosen from the Approved List of Humanities and Social Science Courses for Engineering Degrees at ugs.mst.edu.</i>	Prerequisites vary.	3	

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Semester 3			Elec Eng	2100	Circuits I	Prerequisites: Math 1215 (or 1221) with a grade of "C" or better. Students should enroll in Elec Eng 2100 and Elec Eng 2101 simultaneously.	3	
			Elec Eng	2101	Circuits Analysis Laboratory I	Prerequisite: Preceded or accompanied by Elec Eng 2100. A student who drops Elec Eng 2100 must also drop Elec Eng 2101.	1	
			Math	2222	Calculus with Analytic Geometry III	Prerequisites: Math 1215 or Math 1221 with a grade of "C" or better.	4	
			Comp Eng	2210	Introduction to Digital Logic	Prerequisite: Sophomore standing. Comp Eng 2211 is also a co-requisite for Comp Eng and Elec Eng majors.	3	
			Comp Eng	2211	Computer Engineering Laboratory	Prerequisite: Preceded or accompanied by Comp Eng 2210.	1	
			Physics	one of these	1. Physics 2135 Engineering Physics II or 2. Physics 2111 General Physics II 2a. Physics 2119 General Physics Laboratory	1. Prerequisites: Physics 1135, Math 1221 or Math 1215. 2. Prerequisites: Preceded by Physics 1111 or Physics 1135 and preceded or accompanied by Math 1221 or Math 1215. 2a. Prerequisite: Preceded or accompanied by either Physics 2111 or Physics 2145.	4	

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Semester 4		Elec Eng	2200	Introduction to Electronic Devices	Prerequisites: Elec Eng 2100, Elec Eng 2101, and Physics 2135 each with grade of "C" or better; passing the Elec Eng Advancement Exam I. Students should enroll in Elec Eng 2200 and Elec Eng 2201 simultaneously.	3		
		Elec Eng	2201	Electronic Devices Laboratory	Prerequisites: Elec Eng 2100, Elec Eng 2101, and Physics 2135 each with grade of "C" or better; passing the Elec Eng Advancement Exam I. Preceded or accompanied by Elec Eng 2200.	1		
		Elec Eng	2120	Circuits II	Prerequisites: Elec Eng 2100 and Math 2222 each with grade of "C" or better; passing the Elec Eng Advancement Exam I.	3		
		Math	3304	Elementary Differential Equations	Prerequisite: Math 2222 with a grade of "C" or better.	3		
		<i>Engineering Science Elective</i>	various	various	Students must take MECH ENG 2340, MECH ENG 2519, MECH ENG 2527, PHYSICS 2305, PHYSICS 2311, PHYSICS 2401, NUC ENG 3103, CHEM 2210, BIO SCI 2213, or BIO SCI 2223. The following pairs of course are substitutions: CIV ENG 2200 and MECH ENG 2350 or ENG MGT 2110 and ENG MGT 3310.	Prerequisites vary.	3	
			Comp Sci	1570	Introduction to Programming	Prerequisite: Accompanied by Comp Sci 1580.	3	
	<i>Programming Elective - Lab</i>	various	one of these	1. Comp Sci 1580 Introduction to Programming Laboratory 2. Elec Eng 3001 Circuits and Systems Laboratory	1. Prerequisite: Accompanied by Comp Sci 1570. 2.	1		

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Semester 5		Elec Eng	3100	Electronics I	Prerequisites: Elec Eng 2120, Elec Eng 2200, Elec Eng 2201, and Comp Eng 2210 each with a grade of "C" or better. Passing grade on Elec Eng Advancement Exam II and III. Elec Eng 3101 is a corequisite.	3	
		Elec Eng	3101	Electronics I Laboratory	Prerequisites: Elec Eng 2120, Elec Eng 2200, Elec Eng 2201, and Comp Eng 2210 each with a grade of "C" or better. Passing grade on Elec Eng Advancement Exam II and III. Elec Eng 3100 is a corequisite.	1	
		Elec Eng	3320	Control Systems	Prerequisites: ELEC ENG 2120 and MATH 3304 each with a grade of "C" or better; passing the ELEC ENG Advancement Exam II; accompanied by ELEC ENG 3321.	3	
		Elec Eng	3321	Control Systems Laboratory	Prerequisites: ELEC ENG 2120 and MATH 3304 with a grade of "C" or better; passing the ELEC ENG Advancement Exam II; preceded or accompanied by ELEC ENG 3320.	1	

	<i>Hum/Soc Sci Elective - Communications</i>	various	one of these	1. SP&M S Principles of Speech 2. Mil Army 4250 and 4500 or Mil Air 4110 and 4120.	1. Prerequisite: Entrance requirements. 2. See catalog.	3	
		Math	3108	Linear Algebra I	Prerequisite: Math 1215 or 1221 or 2222 with a grade of "C" or better.	3	

Semester 6		Elec Eng	3600	Electromagnetics	Prerequisites: Elec Eng 2120, Elec Eng 2101, Physics 2135, and Math 3304 each with a grade of "C" or better. Passing grade on Elec Eng Advancement Exam II.	4	
	<i>Technical Elective A</i>	various	one of these	ELEC ENG Electives A, B, and C must be chosen from ELEC ENG 56XX, ELEC ENG 3500, ELEC ENG 3540, ELEC ENG 3410, ELEC ENG 3250, ELEC ENG 3340, ELEC ENG 3440, ELEC ENG 3120, and COMP ENG 3150. Only one ELEC ENG 56XX course may be used.	Prerequisites vary.	3	
		Elec Eng	3430	Digital Communications I	Prerequisites: ELEC ENG 2120 with a grade of "C" or better; passing the ELEC ENG Advancement Exam II; accompanied by ELEC ENG 3431.	3	
		Elec Eng	3431	Digital Communication Laboratory	Prerequisites: ELEC ENG 2120 and ELEC ENG 2101 with a grade of "C" or better; passing the ELEC ENG Advancement Exam II; preceded or accompanied by ELEC ENG 3430.	1	
	<i>Statistics Elective</i>	Stat	one of these	<ol style="list-style-type: none"> Stat 3117 Introduction to Probability and Statistics Stat 3115 Engineering Statistics Stat 5643 Probability And Statistics 	<ol style="list-style-type: none"> Prerequisite: Math 2222 with a grade of "C" or better. Prerequisite: Math 1215 or 1221 with a grade of "C" or better. Prerequisite: Math 2222. 	3	
	<i>Hum/Soc Sci Elective - Communications</i>	English	one of these	<ol style="list-style-type: none"> English 3560 Technical Writing English 1160 Writing And Research 	<ol style="list-style-type: none"> Prerequisites: English 1120 and second-semester junior standing. Prerequisite: English 1120. 	3	

	<i>Technical Elective - Power Lecture</i>	Elec Eng	one of these	1. Elec Eng 3500 Electromechanics 2. Elec Eng 3540 Power System Design and Analysis	1. Prerequisites: Physics 2135 with a grade of "C" or better; Elec Eng 2120 with a grade of "C" or better; passing grade on the Elec Eng Advancement Exam II. 2. Prerequisites: Elec Eng 2120 with a grade of "C" or better; passing grade on the Elec Eng Advancement Exam II.	3
	<i>Technical Elective - Power Lab</i>	Elec Eng	one of these	1. Elec Eng 3501 Electromechanics Laboratory 2. Elec Eng 3541 Power System Design And Analysis Laboratory	1. Prerequisites: Elec Eng 2120 with a grade of "C" or better; passing grade on the Elec Eng Advancement Exam II. Preceded or accompanied by Elec Eng 3500. 2. Prerequisites: Elec Eng 2120 with a grade of "C" or better; passing grade on the Elec Eng Advancement Exam II. Preceded or accompanied by Elec Eng 3540.	1
	<i>Technical Elective B</i>	various	one of these	ELEC ENG Electives A, B, and C must be chosen from ELEC ENG 56XX, ELEC ENG 3500, ELEC ENG 3540, ELEC ENG 3410, ELEC ENG 3250, ELEC ENG 3340, ELEC ENG 3440, ELEC ENG 3120, and COMP ENG 3150. Only one ELEC ENG 56XX course may be used.	Prerequisites vary.	3
	<i>Technical Elective D</i>	various	one of these	ELEC ENG Elective D must be a 4XXX-level or above ELEC ENG or COMP ENG course with at least a 3-hour lecture component. ELEC ENG 4000, ELEC ENG 5000, COMP ENG 4000, COMP ENG 5000, ELEC ENG 4099, COMP ENG 4099, ELEC ENG 4096, COMP ENG 4096, ELEC ENG 4097, COMP ENG 4097, ELEC ENG 5070, COMP ENG 5070, ELEC ENG 58XX, and COMP ENG 58XX may not be used for Elective D.	Prerequisites vary.	3
		Elec Eng	4096	Electrical Engineering Senior Project I	Prerequisites: Comp Eng 2210, Econ 1100 or 1200, English 3560, at least 3 of the following: Elec Eng 3500, Elec Eng 3540, Elec Eng 3320, Elec Eng 3420, Elec Eng 3600, Elec Eng 3100.	1
	<i>Free Elective</i>	various	one of these	Students are required to take five hours of free elective in consultation with their academic advisors. Credits that do not count toward this requirement are deficiency courses (such as algebra and trigonometry) and extra credits from courses meeting other requirements. Any courses outside of engineering and science must be at least three credit hours. ELEC ENG 28XX, ELEC ENG 38XX, ELEC ENG 4096, ELEC ENG 4097, COMP ENG 28XX, COMP ENG 38XX, COMP ENG 4096 and COMP ENG 4097 may not be used for free electives. No more than one credit hour of ELEC ENG 3002 or COMP ENG 3002 may be applied to the BS degree for free electives.	Prerequisites vary.	3

	<i>Hum/Soc Sci Elective</i>	various	one of these	<i>(FEP) Course chosen from the Approved List of Humanities and Social Science Courses for Engineering Degrees at ugs.mst.edu.</i>	Prerequisites vary.	3		
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Semester 8	<i>Technical Elective C</i>	various	one of these	ELEC ENG Electives A, B, and C must be chosen from ELEC ENG 56XX, ELEC ENG 3500, ELEC ENG 3540, ELEC ENG 3410, ELEC ENG 3250, ELEC ENG 3340, ELEC ENG 3440, ELEC ENG 3120, and COMP ENG 3150. Only one ELEC ENG 56XX course may be used.	Prerequisites vary.	3		
	<i>Technical Elective E</i>	various	one of these	ELEC ENG Elective E may be any 3XXX-level or above ELEC ENG or COMP ENG course except ELEC ENG 3002, ELEC ENG 38XX, ELEC ENG 4096, ELEC ENG 4097, and ELEC ENG 5070 and COMP ENG 3002, COMP ENG 38XX, COMP ENG 4000, COMP ENG 4096, COMP ENG 4097, and COMP ENG 5070.	Prerequisites vary.	3		
		Elec Eng	4097	Electrical Engineering Senior Project II	Prerequisite: Elec Eng 4096 with a grade of "C" or better, Stat 3117, Sp&M S 1185.	3		
	<i>Hum/Soc Sci Elective - Upper Level</i>	various	one of these	<i>(FEP) Course, chosen from the Approved List of Humanities and Social Science Courses for Engineering Degrees at ugs.mst.edu, at the 2000-level or above which requires as a prerequisite the successful completion of a lower level humanities or social sciences course. Foreign language courses numbered 1180 will be considered to satisfy this requirement. Students may receive humanities credit for foreign language courses in their native tongue only if the course is at the 4000 level.</i>	Prerequisites vary.	3		
	<i>Free Elective</i>	various	one of these	Students are required to take five hours of free elective in consultation with their academic advisors. Credits that do not count toward this requirement are deficiency courses (such as algebra and trigonometry) and extra credits from courses meeting other requirements. Any courses outside of engineering and science must be at least three credit hours. ELEC ENG 28XX, ELEC ENG 38XX, ELEC ENG 4096, ELEC ENG 4097, COMP ENG 28XX, COMP ENG 38XX, COMP ENG 4096 and COMP ENG 4097 may not be used for free electives. No more than one credit hour of ELEC ENG 3002 or COMP ENG 3002 may be applied to the BS degree for free electives.	Prerequisites vary.	2		
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Total = 128