

University of Missouri

Bachelor of Science in Electrical Engineering

Transfer Guide for Mineral Area College

This plan is intended only as a general guide based on requirements in the 2013-2014 University of Missouri undergraduate catalog. Check the following web sites for current course descriptions, prerequisites, course equivalencies and other specific details about the Electrical Engineering major:

- 1) College Catalog (<http://registrar.missouri.edu/>)
- 2) Transfer Equivalencies (<http://transfercourses.missouri.edu>)
- 3) General Education (<http://generaleducation.missouri.edu>)
- 4) Electrical Engineering (<http://engineering.missouri.edu/ece/degree-programs/>)

For more information, contact the Department of Electrical and Computer Engineering at 573-882-2648 or Beattyt@missouri.edu.

University of Missouri		Mineral Area College
COURSE	CREDITS	EQUIVALENT COURSE (CREDITS)
Mathematics (19 credits)		
MATH 1500 Analytic Geometry and Calculus I	5	MAT 1650 Analy Geom & Calc I (5)
MATH 1700 Calculus II	5	MAT 2150 Analy Geom & Calc II (5)
MATH 2300 Calculus III	3	MAT 2250 Analy Geom & Calc III (5)
MATH 4100 Differential Equations	3	MAT 2330 Differential Equations (3)
STAT 4710 Intro to Mathematical Statistics	3	None
Physics and Chemistry (14 credits)		
CHEM 1320 College Chemistry I	4	PHS 1350 Gen Chemistry I (5)
PHYSCS 2750 University Physics I	5	PHS 2230 Gen Physics I (4)
PHYSCS 2760 University Physics II	5	PHS 2240 Gen Physics II (4)
English Exposition and Argumentation (3 credits)		
ENGLISH 1000 Exposition and Argumentation	3	ENG 1340 English Comp II (3) or ENG 1430 Exposition (3)
Behavioral & Social Science (9 credits) Courses from at least two different departments.		
State Requirement in Government or History	3	Select state requirement from the general education list.
Social or Behavioral Science Elective	3	Select social or behavioral sciences from the general education list.
Social or Behavioral Science Elective	3	
Humanities/Fine Arts (Option 1 – Conventional Track) (9 credits) ▪ Only one humanities/fine arts track (Conventional or Foreign Language) must be completed ▪ Courses from at least two different departments ▪ A maximum of 3 credit hours for skills classes ▪ No foreign language courses may be used for this option		
Humanity 1	3	Select humanities from the general education list.
Humanity 2	3	
Humanity 3	3	
Humanities/Fine Arts (Option 2 - Foreign Language Track) (12 credits) ▪ Only one humanities/fine arts track (Conventional or Foreign Language) must be completed ▪ Minimum of 12 college transcribed hours in a single foreign language ▪ Satisfies the 2000-level requirement		
Foreign Language 1	5	Select foreign language courses from the general education list.
Foreign Language 2	5	
Foreign Language 3	3	
Upper Level General Education (3 credits)		
At least 3 credit hours of behavioral science, social science or humanity must be at the 2000-level or above		
<input checked="" type="checkbox"/> Upper-level general education courses may also count toward behavioral sciences, social sciences, or humanities.		
Upper Level Course	3	Select 200-level/2000-level courses from behavioral science, social science, or humanity on the general education list. Level is based upon the community college courses number, NOT the MU equivalent.
Writing Intensive (6 credits)		
Writing intensive course (humanity, social or behavioral science or technical elective)	3	Must be taken at MU
ECE 4970 Capstone Design	3	Must be taken at MU
Engineering (45 credits)		
CS 1050 Algorithm Design and Programming	3	None
Select two of the following three courses:		
ENGINR 1200 Statics and Elementary Strength of Materials	6	EGN 2130 Eng Mech-Stat (3)
ENGINR 2300 Engineering Thermodynamics		
IMSE 2710 Engineering Economic Analysis		
ECE 1000 Intro to Electrical and Computer Engineering	2	None
ECE 1210 Intro to Logic Systems	3	None
ECE 2100 Circuit Theory I	4	None
ECE 3210 Microprocessor Engineering	4	None
ECE 3810 Circuit Theory II	4	None

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COURSE	CREDITS	EQUIVALENT COURSE (CREDITS)
ECE 3410 Electronic Circuits and Signals I	4	None
ECE 3510 Electromagnetic Fields	3	None
ECE 3830 Signals and Linear Systems	3	None
ECE 3610 Semiconductors and Devices	3	None
ECE 3110 Electrical and Computer Engineering Projects	3	None
ECE 4970 Senior Capstone Design(<i>Writing Intensive</i>)	3	None
Technical Elective (12 credits)		
ECE or CS 3000+ or Math, Physics, Chemistry, BioE, ChemE, Civil, IMSE, MAE Engr.2000+	12	None
ECE Electives (13 credits)		
ECE Electives (4000+)	9	None
ECE Senior Lab (4000+)	4	None
Free Electives (2 credits)		
Total Hours for BS in Electrical Engineering	126	

General Education Courses

Mineral Area College

<u>Mineral Area College Course</u>	<u>MU Equivalent</u>	<u>Mineral Area College Course</u>	<u>MU Equivalent</u>
Behavioral Sciences		Social Sciences (◆=State Requirement)	
EDU 1300 Child Dev (3)	PSYCH 2410	BUS 2930 Prin of Macroeconomics (3)	ECONOM 1015
ENG 1670 Interpers Comm I (3)	COMMUN 3561	BUS 2940 Prin of Microeconomics (3)	ECONOM 1014
PSY 1130 Gen Psychology I (3)	PSYCH 1000	GEO 1130 Regional World Geography (3)	GEOG SSC
PSY 1140 Gen Psychology II (3)	PSYCH BEH	HIS 1100 World Civ I (3)	HIST SSC
PSY 1160 Applied Psych (3)	PSYCH 1020	HIS 1130 West Civ I (3)	HIST 1500
PSY 1250 Hum Growth & Devel (3)	PSYCH BEH	HIS 1140 West Civ II (3)	HIST 1510
PSY 2000 Abnormal Psych (3)	PSYCH 2510	HIS 1190 Hist of Christianity (3)	HIST 1580
SOC 1130 Gen Sociology (3)	SOCIOL 1000	◆HIS 1230 American Hist I (3)	HIST 1100
SOC 1230 Social Problems (3)	SOCIOL 1650	◆HIS 1240 American Hist II (3)	HIST 1200
SOC 1240 Substance Abuse (3)	SOCIOL BEH	HIS 1350 Directed Stds in Hist-Hon (1)	HIST SSC
SOC 1540 Intro Cultural Anthro (3)	ANTHRO 2030	HIS 1360 Intro Latin Amer History (3)	HIST 1850
SOC 1600 Ethnic & Cult Diff in Am (3)	SOCIOL BEH	HIS 1520 World Civ II (3)	HIST SSC
SOC 1620 Human Diversity (3)	SOCIOL BEH	◆POS 1180 American Political Syst (3)	POL_SC 1100
		◆POS 1230 Intro to Pol Sc (3)	POL_SC 1700
Humanities		Foreign Language	
ART 1490 History of Art I (3)	AR_H_A 1110	MFL 1170 Elem French (3)	FRENCH 1100A
ART 1500 History of Art II (3)	AR_H_A HUM	MFL 1270 Intermed French (3)	FRENCH 1100B
ART 1510 History of Art III (3)	AR_H_A HUM	MFL 1370 Elem Spanish (3)	SPAN 1100A
ART 1530 Intro to Humanities (3)	MISC HUM	MFL 1470 Intermed Spanish (3)	SPAN 1100B
COM 1000 Intro Mass Comm (3)	COMMUN 2100	MFL 1560 Germ Lang&Cult I (4)	GERMAN 1100
COM 1060 Intro to Cinema (3)	FILM_S HUM	MFL 2130 French Comp&Conv (3)	FRENCH 1200
ENG 1440 Public Speaking (3)	COMMUN 1200	MFL 2140 French Reading (3)	FRENCH 2100
ENG 1460 Argum & Debate (3)	COMMUN 3572	MFL 2230 Intermediate Spanish I (3)	SPAN 1200
ENG 1570 Intro Lit: Prose&Poetry (3)	ENGLISH LIT	MFL 2250 Intermediate Spanish II (3)	SPAN 2100
ENG 2330 English Lit I (3)	ENGLISH 2200	MFL 2350 Adv Germ Gram&Read (3)	GERMAN 1200
ENG 2340 English Lit II (3)	ENGLISH 2200	MFL 2460 Germ Lang&Cult II (4)	GERMAN 1200
ENG 2430 American Lit I (3)	ENGLISH 2300		
ENG 2440 American Lit II (3)	ENGLISH 2300		
ENG 2460 Read in Short Fiction (3)	ENGLISH LIT		
ENG 2500 Multicultural Lit (3)	ENGLISH 2155		
MFL 1290 Cult of Fren Spkng World (3)	FRENCH 2310		
MFL 2380 Euro/Latin Amer Cult (1)	MISC HUM		
MFL 2390 Euro/Latin Amer Cult (3)	MISC HUM		
MFL 2400 Euro/Latin Amer Cult (5)	MISC HUM		
MSC 1201 Music Theo I (3)	MUS_THR1220		
MSC 1202 Music Theo II (3)	MUS_THR1221		
MSC 1801 Apprec of Music (3)	MUSIC_N1310		
MSC 1811 Apprec of Jazz (3)	MUSIC_N 1312		
MSC 1821 Hist & Form of Rock Music (3)	MUSIC_N 1311		
PHI 1400 Intro to Phil (3)	PHIL 1000		
PHI 1410 Comparative Religion (3)	REL_ST 2110		
PHI 1420 Intro to Ethics (3)	PHIL 1100		
THE 1000 Intro to Theater (3)	THEATR 1100		
THE 1040 Begin Acting (3)	THEATR 1400		
THE 1200 Intro Lit: Drama (3)	THEATR 2800		
THE 2120 World Drama (3)	THEATR 3700		