

Southeast Missouri State University — Missouri S&T

General Engineering Transfer Guide

Effective as of Fall 2017

Complete Group 1 - Core Requirements and Group 2 - Major Requirements for major of choice.

Group 1 - Core Requirements: All Majors Take All Courses

Engineering students take all Group 1 - Core Requirements and Group 2 - Major Requirements for major of choice. Math prerequisites: While they are not part of Missouri S&T engineering degree requirements, algebra and trigonometry skills are critical to success in calculus. To prepare for entry into calculus, students should follow math placement testing and advising recommendations at their college.

<u>Southeast Missouri State University</u>			<u>Semester</u>	<u>Missouri S&T</u>		
MA 140	Analytical Geometry and Calculus I	5	MATH 1214	Calculus for Engineers I	Grade of C or better is required.	4
MA 145	Analytical Geometry and Calculus II	5	MATH 1215	Calculus for Engineers II	Grade of C or better is required.	4
MA 244	Analytic Geometry & Calculus III	4	MATH 2222	Calculus with Analytic Geometry III	Grade of C or better is required.	4
MA 350	Differential Equations I	3	MATH 3304	Elementary Differential Equations		3
PH 230	General Physics I	5	PHYSICS 1135	Engineering Physics I	Grade of C or better is required.	4
PH 231	General Physics II	5	PHYSICS 2135	Engineering Physics II	Grade of C or better is required.	4
CH 185	General Chemistry	5	CHEM 1310, 1319	General Chemistry I and Lab		5
EP 100	Physics and Engineering Concepts	1	FR ENG 1100	Study and Careers in Engineering		1
MN 120	Fundamentals of Engineering Design	3	MECH ENG 1720	Engineering Design with Computer Appl		3
EN 100	English Composition	3	ENGLISH 1120	Exposition and Argumentation		3
EC 215 or EC 225	Principles of Microeconomics or Principles of Macroeconomics	3	ECON 1100 or ECON 1200	Principles of Microeconomics or Principles of Macroeconomics		3
Total Hours			42			Total Hours 38

Group 2 - Major Requirements: Take All Courses for Major of Choice

Engineering students take all Group 1 - Core Requirements (above) and Group 2 - Major Requirements for chosen major from list below. See course requirements on following pages.

Aerospace Engineering
Architectural Engineering
Ceramic Engineering
Chemical Engineering
**Chemical Engineering/Biochemistry
Emphasis**
Civil Engineering
Computer Engineering
Electrical Engineering

Engineering Management
Environmental Engineering
Geological Engineering
Mechanical Engineering
Metallurgical Engineering
Mining Engineering
Nuclear Engineering
Petroleum Engineering

Engineering Major Requirements are detailed on the following pages.

Free Electives: Some programs allow Free Electives as indicated within each major. Free Electives should be selected in consultation with your advisor and may not include remedial/deficiency courses, algebra, trigonometry, pre-calculus, or extra credits in required courses.

Humanities/Social Science (HSS) Electives: HSS electives may include any history, economics, political science, sociology, psychology, philosophy, fine art, literature, or foreign language. Missouri S&T approved HSS courses are listed at ugs.mst.edu. Your campus may have additional acceptable options. Consult with your advisor or email transfer@mst.edu with questions.

Aerospace Engineering Group 2 Major Requirements

Southeast Missouri State University		Semester	Missouri S&T		
US 105 or US 107 or EH 1200 or PS 103	American History I or American History II or Modern European Civilization or US Political Systems	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government	3
EN 140 or SC 105	Rhetoric and Critical Thinking or Fundamentals of Oral Communication	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
CS 155 or CS 265	Computer Science I or Computer Science II	3	CS 1971, 1981 or CS 1570, 1580	Intro to Programming Method and Lab (C++) or Intro to Programming and Lab (C++)	4
EP 240	Circuit Analysis	4	EE 2800	Circuit Analysis I	3
EP 261	Engineering Mechanics-Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
EP 263	Mechanics of Materials	4	CIV ENG 2210	Mechanics of Materials	3
MA 345	Linear Algebra	3	MATH 3108	Linear Algebra I <small>(Will satisfy the Advanced Math/Comp Sci elective requirement.)</small>	3
<i>See your advisor for course options.</i>				Literature Elective	3
<i>See your advisor for course options.</i>				Ethics Elective	3
<i>No free electives applied to the degree.</i>				Maximum Free Electives	0
Group 2 Major Requirements		23	Group 2 Major Requirements		28
Group 1 Core Requirements		42	Group 1 Core Requirements		38
Total Hours		65	Total Hours*		66

*S&T advisor permission is required to transfer more than 66 credits toward the S&T Aerospace Engineering degree.

Architectural Engineering Group 2 Major Requirements

Southeast Missouri State University		Semester	Missouri S&T		
EH 1200 or US 105 or US 107	Modern European Civilization or History I or History II	3	HISTORY 1200* (or HISTORY 1300 or HISTORY 1310)	Modern Western Civilization* (or American History to 1877 or American History since 1877) <small>*HISTORY 1200 is preferred; 1300 or 1310 will also be accepted.</small>	3
EP 261	Engineering Mechanics-Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
PHYS 242	Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
EP 263	Mechanics of Materials	4	CIV ENG 2210	Mechanics of Materials	3
EN 140 or SC 105 or HSS Elective	Rhetoric and Critical Thinking or Fundamentals of Oral Communication or <i>See your advisor for course options</i>	3	ENGLISH 1160 or SPMS 1185 or HSS Elective	Writing and Research or Public Speaking or Humanities/Social Science Elective: history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language	3
BIOL 161 or PHYS 224	Intro to Anatomy and Physiology or Modern Physics	4	BIO SCI 1943 or PHYSICS 2305	Intro to Human Anatomy and Physiology I or Intro to Modern Physics (or other chemistry, geology, biology, physics, or astronomy course that is not otherwise required for the degree) <small>Applies to the degree as a basic science elective</small>	4
<i>No free electives applied to the degree.</i>				Maximum Free Electives	0
Group 2 Major Requirements		20	Group 2 Major Requirements		19
Group 1 Core Requirements		42	Group 1 Core Requirements		38
Total Hours		62	Total Hours*		57

*S&T advisor permission is required to transfer more than 66 credits toward the S&T Architectural Engineering degree.

Ceramic Engineering Group 2 Major Requirements

Southeast Missouri State University		Semester	Missouri S&T		
US 105 or US 107 or EH 1200 or PS 103	American History I or American History II or Modern European Civilization or US Political Systems	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government	3
EP 261	Engineering Mechanics-Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
EP 263	Mechanics of Materials	4	CIV ENG 2210	Mechanics of Materials	3
CH 341, 342	Foundations of Organic Chemistry and Lab	5	CHEM 2210/2219	Organic Chemistry I and Lab (Not a specific requirement. Will satisfy technical elective requirement.)	5
CH 186	Foundations of Inorganic Chemistry	3	CHEM 1320	General Chemistry II	3
EN 140 or SC 105 or HSS Elective	Rhetoric and Critical Thinking or Fundamentals of Oral Communication or <i>See your advisor for course options</i>	3	ENGLISH 1160 or SPMS 1185 or HSS Elective	Writing and Research or Public Speaking or Humanities/Social Science Elective: history, economics, political science, sociology, psychology, philosophy, fine Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>			Maximum Free Electives	0
	<i>No free electives applied to the degree.</i>			Group 2 Major Requirements	23
	Group 2 Major Requirements	21		Group 1 Core Requirements	38
	Group 1 Core Requirements	42		Total Hours*	61
	Total Hours	63		<small>*S&T advisor permission is required to transfer more than 66 credits toward the S&T Ceramic Engineering degree.</small>	

Chemical Engineering Group 2 Major Requirements

Southeast Missouri State University		Semester	Missouri S&T		
EN 140	Rhetoric and Critical Thinking	3	ENGLISH 1160	Writing and Research	3
US 105 or US 107 or EH 1200 or PS 103	American History I or American History II or Modern European Civilization or US Political Systems	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government	3
CH 186	Foundations of Inorganic Chemistry	3	CHEM 1320	General Chemistry II	3
CH 341	Foundations of Organic Chemistry	3	CHEM 2210	Organic Chemistry I	3
CH 343	Advanced Organic Chemistry	3	CHEM 2220	Organic Chemistry II (Will satisfy science elective requirement.)	3
CS 155 or CS 265	Computer Science I or Computer Science II	3	CS 1971, 1981 or CS 1570, 1580	Intro to Programming Method and Lab (C++) or Intro to Programming and Lab (C++)	4
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>			Maximum Free Electives	0
	Group 2 Major Requirements	18		Group 2 Major Requirements	25
	Group 1 Core Requirements	42		Group 1 Core Requirements	38
	Total Hours	60		Total Hours*	63
				<small>*S&T advisor permission is required to transfer more than 69 credits toward the S&T Chemical Engineering degree.</small>	

Chemical Engineering - Biochemical Engineering Emphasis Group 2 Major Requirements

Southeast Missouri State University		Semester	Missouri S&T		
EN 140	Rhetoric and Critical Thinking	3	ENGLISH 1160	Writing and Research	3
US 105 or US 107 or EH 1200 or PS 103	American History I or American History II or Modern European Civilization or US Political Systems	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government	3
CH 186	Foundations of Inorganic Chemistry	3	CHEM 1320	General Chemistry II	3
CH 341	Foundations of Organic Chemistry	3	CHEM 2210	Organic Chemistry I	3
CH 343	Advanced Organic Chemistry	3	CHEM 2220	Organic Chemistry II (Will satisfy science elective requirement.)	3
CS 155 or CS 265	Computer Science I or Computer Science II	3	CS 1971, 1981 or CS 1570, 1580	Intro to Programming Method and Lab (C++) or Intro to Programming and Lab (C++)	4
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>			Maximum Free Electives	0
	Group 2 Major Requirements	18		Group 2 Major Requirements	25
	Group 1 Core Requirements	42		Group 1 Core Requirements	38
	Total Hours	60		Total Hours*	63
				<small>*S&T advisor permission is required to transfer more than 71 credits toward the S&T Chemical/Biochemical Engineering degree.</small>	

Civil Engineering Group 2 Major Requirements

Southeast Missouri State University		Semester	Missouri S&T		
EN 140 or SC 105	Rhetoric and Critical Thinking or Fundamentals of Oral Communication	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
US 105 or US 107 or EH 1200 or PS 103	American History I or American History II or Modern European Civilization or US Political Systems	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government	3
GO 110	Physical Geology	3	GEO 1111/GE 1150	Intro to Physical Geology	3
EP 261	Engineering Mechanics-Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
PHYS 242	Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
EP 263	Mechanics of Materials	4	CIV ENG 2210, 2211	Mechanics of Materials and Materials Testing	4
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>			Maximum Free Electives	0
	Group 2 Major Requirements	19		Group 2 Major Requirements	22
	Group 1 Core Requirements	42		Group 1 Core Requirements	38
	Total Hours	61		Total Hours*	60

*S&T advisor permission is required to transfer more than 69 credits toward the S&T Civil Engineering degree.

Computer Engineering Group 2 Major Requirements

Southeast Missouri State University		Semester	Missouri S&T		
SC 105	Fundamentals of Oral Communication	3	SPMS 1185	Public Speaking	3
EN 140	Rhetoric and Critical Thinking	3	ENGLISH 1160	Writing and Research	3
US 105 or US 107 or EH 1200 or PS 103	American History I or American History II or Modern European Civilization or US Political Systems	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government	3
MA 138	Discrete Math I	3	CS 1200	Discrete Math for Computer Science	3
CS 265	Computer Science II	3	CS 1570, 1580	Intro to Programming and Lab (C++)	4
CS 300	Computer Science III		CS 1575	Data Structures	3
EP 261 & PHYS 242	Engineering Mechanics-Statics & Dynamics	6	CIV ENG 2200 and MECH ENG 2350	Engineering Mechanics-Statics and Engineering Mechanics-Dynamics (Both courses combined will satisfy a required engineering science elective.)	6
EP 240	Circuit Analysis	4	EE 2100**	Circuits I **A passing grade on the Missouri S&T EE Advancement Exam I is required to receive credit for EE 2100.	3
MA 345	Linear Algebra	3	MATH 3108	Linear Algebra (Will satisfy a required math elective.)	3
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>			Maximum Free Electives	3
	Group 2 Major Requirements	28		Group 2 Major Requirements	37
	Group 1 Core Requirements	42		Group 1 Core Requirements	38
	Total Hours	70		Total Hours*	75

*S&T advisor permission is required to transfer more than 68 credits toward the S&T Computer Engineering degree.

Electrical Engineering Group 2 Major Requirements

Southeast Missouri State University		Semester	Missouri S&T		
SC 105	Fundamentals of Oral Communication	3	SPMS 1185	Public Speaking	3
EN 140	Rhetoric and Critical Thinking	3	ENGLISH 1160	Writing and Research	3
US 105 or US 107 or EH 1200 or PS 103	American History I or American History II or Modern European Civilization or US Political Systems	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government	3
CS 265	Computer Science II	3	CS 1570, 1580	Intro to Programming and Lab (C++)	4
EP 261 & PHYS 242	Engineering Mechanics-Statics & Dynamics	6	CIV ENG 2200 and MECH ENG 2350	Engineering Mechanics-Statics and Engineering Mechanics-Dynamics (Both courses combined will satisfy a required engineering science elective.)	6
EP 240	Circuit Analysis	4	EE 2100**	Circuits I **A passing grade on the Missouri S&T EE Advancement Exam I is required to receive credit for EE 2100.	3
MA 345	Linear Algebra	3	MATH 3108	Linear Algebra	3
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>			Maximum Free Electives	3
	Group 2 Major Requirements	25		Group 2 Major Requirements	31
	Group 1 Core Requirements	42		Group 1 Core Requirements	38
	Total Hours	67		Total Hours*	69

*S&T advisor permission is required to transfer more than 68 credits toward the S&T Electrical Engineering degree.

Engineering Management Group 2 Major Requirements

<u>Southeast Missouri State University</u>		<u>Semester</u>	<u>Missouri S&T</u>		
PY 101 or PY 102 US 105 or US 107 or EH 1200 or PS 103 EN 140 or SC 105 EP 240 EP 261 PHYS 242 EP 263	Psychological Persp on Human Behavior or Intro to Psychology American History I or American History II or Modern European Civilization or US Political Svstems Rhetoric and Critical Thinking or Fundamentals of Oral Communication Circuit Analysis Engineering Mechanics-Statics Dynamics Mechanics of Materials	3 3 3 4 3 3 4	PSYCH 1101 HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200 ENGLISH 1160 or SPMS 1185 EE 2800 CIV ENG 2200 MECH ENG 2350 CIV ENG 2210 and CIV ENG 2111	General Psychology American History to 1877 or American History since 1877 or Modern Western Civilization or American Government Writing and Research or Principles of Speech Circuit Analysis I Engineering Mechanics-Statics Engineering Mechanics-Dynamics Mechanics of Materials and Material Testing Humanities/Social Science Elective Maximum Free Electives	3 3 3 3 3 3 4 3 3 3 3
<i>See your advisor for course options.</i>			<i>See your advisor for course options.</i>		
Group 2 Major Requirements		23	Group 2 Major Requirements		28
Group 1 Core Requirements		42	Group 1 Core Requirements		38
Total Hours		65	Total Hours*		66

*S&T advisor permission is required to transfer more than 68 credits toward the S&T Engineering Management degree.

Environmental Engineering Group 2 Major Requirements

<u>Southeast Missouri State University</u>		<u>Semester</u>	<u>Missouri S&T</u>		
EN 140 or SC 105 US 105 or US 107 or EH 1200 GO 110 CH 186 BI 120 EP 261 PHYS 242 EP 263	Rhetoric and Critical Thinking or Fundamentals of Oral Communication American History I or American History II or Modern European Civilization Physical Geology Foundations of Inorganic Chemistry Biology Principles Engineering Mechanics-Statics Dynamics Mechanics of Materials	3 3 3 3 3 3 3 4	ENGLISH 1160 or SPMS 1185 HISTORY 1300 or HISTORY 1310 or HISTORY 1200 GEO 1111/GE 1150 CHEM 1320 BIO SCI 1113 CIV ENG 2200 MECH ENG 2350 CIV ENG 2210 and CIV ENG 2111	Writing and Research or Principles of Speech American History to 1877 (preferred) or American History since 1877 (preferred) or Modern Western Civilization Intro to Physical Geology General Chemistry II General Biology Engineering Mechanics-Statics Engineering Mechanics-Dynamics Mechanics of Materials and Material Testing Humanities/Social Science Elective Maximum Free Electives	3 3 3 3 4 3 3 4 3 3 3 0
<i>See your advisor for course options.</i>			<i>See your advisor for course options.</i>		
<i>No free electives applied to the degree.</i>			<i>No free electives applied to the degree.</i>		
Group 2 Major Requirements		25	Group 2 Major Requirements		29
Group 1 Core Requirements		42	Group 1 Core Requirements		38
Total Hours		67	Total Hours*		67

*S&T advisor permission is required to transfer more than 68 credits toward the S&T Environmental Engineering degree.

Geological Engineering Group 2 Major Requirements

<u>Southeast Missouri State University</u>		<u>Semester</u>	<u>Missouri S&T</u>		
EN 140 or SC 105 US 105 or US 107 or EH 1200 or PS 103 GO 150 EP 261 PHYS 242 EP 263 BIO 120 or CH 186 or CH 341	Rhetoric and Critical Thinking or Fundamentals of Oral Communication American History I or American History II or Modern European Civilization or US Political Svstems Earth Science Environmental Hazard Engineering Mechanics-Statics Dynamics Mechanics of Materials Biology Principles or Foundations of Inorganic Chemistry or Foundations of Organic Chemistry	3 3 3 3 3 3 4 3	ENGLISH 1160 or SPMS 1185 HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200 GEO 1110, 1119 CIV ENG 2200 MECH ENG 2350 CIV ENG 2210 BIO SCI 1113 or CHEM 1320 or CHEM 2210	Writing and Research or Principles of Speech American History to 1877 or American History since 1877 or Modern Western Civilization or American Government Physical and Environmental Geology and Lab Engineering Mechanics-Statics Engineering Mechanics-Dynamics Mechanics of Materials General Biology or General Chemistry II or Organic Chemistry I <small>or any 3-hour course in chemistry, geochemistry, or biology</small> Humanities/Social Science Elective Humanities/Social Science Elective Maximum Free Electives	3 3 3 3 3 3 3 3 3 3 3 0
<i>See your advisor for course options.</i>			<i>See your advisor for course options.</i>		
<i>No free electives applied to the degree.</i>			<i>No free electives applied to the degree.</i>		
Group 2 Major Requirements		22	Group 2 Major Requirements		27
Group 1 Core Requirements		42	Group 1 Core Requirements		38
Total Hours		64	Total Hours*		65

*S&T advisor permission is required to transfer more than 68 credits toward the S&T Geological Engineering degree.

Mechanical Engineering Group 2 Major Requirements

Southeast Missouri State University		Semester	Missouri S&T		
US 105 or US 107 or EH 1200 or PS 103 EN 140 or SC 105 CS 155 or CS 265 EP 240 EP 261 EP 263 MA 345	American History I or American History II or Modern European Civilization or US Political Systems Rhetoric and Critical Thinking or Fundamentals of Oral Communication Computer Science I or Computer Science II Circuit Analysis Engineering Mechanics-Statics Mechanics of Materials Linear Algebra	3 3 3 3 4 3 4 3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200 ENGLISH 1160 or SPMS 1185 CS 1971, 1981 or CS 1570, 1580 EE 2800 CIV ENG 2200 CIV ENG 2210 MATH 3108	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government Writing and Research or Principles of Speech Intro to Programming Method and Lab (C++) or Intro to Programming and Lab (C++) Circuit Analysis I Engineering Mechanics-Statics Mechanics of Materials Linear Algebra I <small>(Will satisfy the Advanced Math/Comp Sci elective requirement.)</small> Literature Elective Humanities/Social Science Elective Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements	3 3 4 3 3 3 3 3 3 3 3 0 18 38 56
<i>See your advisor for course options.</i>					
<i>No free electives applied to the degree.</i>					
		Group 2 Major Requirements 14 Group 1 Core Requirements 42 Total Hours 56	Total Hours* 56		

*S&T advisor permission is required to transfer more than 68 credits toward the S&T Mechanical Engineering degree.

Metallurgical Engineering Group 2 Major Requirements

Southeast Missouri State University		Semester	Missouri S&T		
EN 140 or SC 105 US 105 or US 107 or EH 1200 or PS 103 EP 261 EP 263 CH 186 CH 341 or EP 240	Rhetoric and Critical Thinking or Fundamentals of Oral Communication American History I or American History II or Modern European Civilization or US Political Systems Engineering Mechanics-Statics Mechanics of Materials Foundations of Inorganic Chemistry Foundations of Organic Chemistry or Circuit Analysis	3 3 3 4 3 4	ENGLISH 1160 or SPMS 1185 HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200 CIV ENG 2200 CIV ENG 2210 CHEM 1320 CHEM 2210 or EE 2800	Writing and Research or Principles of Speech American History to 1877 or American History since 1877 or Modern Western Civilization or American Government Engineering Mechanics-Statics Mechanics of Materials General Chemistry II Organic Chemistry I or Electrical Circuits <small>Not specifically required for the degree but will satisfy Out-of-Department Technical Elective Requirement</small> Humanities/Social Science Elective Humanities/Social Science Elective Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements	3 3 3 3 3 3 4 3 3 5 30 38 68
<i>See your advisor for course options.</i>					
<i>See your advisor for course options.</i>					
<i>See your advisor for course options.</i>					
		Group 2 Major Requirements 20 Group 1 Core Requirements 42 Total Hours 62	Total Hours* 68		

*S&T advisor permission is required to transfer more than 68 credits toward the S&T Metallurgical Engineering degree.

Mining Engineering Group 2 Major Requirements

<u>Southeast Missouri State University</u>		<u>Semester</u>	<u>Missouri S&T</u>		
EN 140	Rhetoric and Critical Thinking	3	ENGLISH 1160	Writing and Research	3
US 105 or	American History I or		HISTORY 1300 or	American History to 1877 or	
US 107 or	American History II or	3	HISTORY 1310 or	American History since 1877 or	3
EH 1200 or	Modern European Civilization or		HISTORY 1200 or	Modern Western Civilization or	
PS 103	US Political Systems		POL SCI 1200	American Government	
EP 261	Engineering Mechanics-Statics	3	CIV ENG 2200*	Engineering Mechanics-Statics	3
PHYS 242	Dynamics	3	MECH ENG 2350*	Engineering Mechanics-Dynamics	3
EP 263	Mechanics of Materials	4	CIV ENG 2210*	Mechanics of Materials	3
			*The combination of CIV ENG 2200 and MECH ENG 2350 will be substituted for MECH ENG 2340. The Combination of CIV ENG 22000 and 2210 and MECH ENG 2350 will be substituted for MI ENG 3812		
GO 110	Physical Geology	3	GEO 1111/GE 1150	Intro to Physical Geology	3
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>			Maximum Free Electives	0
	Group 2 Major Requirements	19		Group 2 Major Requirements	24
	Group 1 Core Requirements	42		Group 1 Core Requirements	38
	Total Hours	61		Total Hours*	62

*S&T advisor permission is required to transfer more than 68 credits toward the S&T Mining Engineering degree.

Nuclear Engineering Group 2 Major Requirements

<u>Southeast Missouri State University</u>		<u>Semester</u>	<u>Missouri S&T</u>		
EN 140	Rhetoric and Critical Thinking	3	ENGLISH 1160	Writing and Research	3
US 105 or	American History I or		HISTORY 1300 or	American History to 1877 or	
US 107 or	American History II or	3	HISTORY 1310 or	American History since 1877 or	3
EH 1200 or	Modern European Civilization or		HISTORY 1200 or	Modern Western Civilization or	
PS 103	US Political Systems		POL SCI 1200	American Government	
CS 155 or	Computer Science I or	3	CS 1971, 1981 or	Intro to Programming Method and Lab (C++) or	4
CS 265	Computer Science II		CS 1570, 1580	Intro to Programming and Lab (C++)	
EP 261	Engineering Mechanics-Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
EP 263	Mechanics of Materials	4	CIV ENG 2210	Mechanics of Materials	3
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>			Maximum Free Electives	6
	Group 2 Major Requirements	16		Group 2 Major Requirements	28
	Group 1 Core Requirements	42		Group 1 Core Requirements	38
	Total Hours	58		Total Hours*	66

*S&T advisor permission is required to transfer more than 68 credits toward the S&T Nuclear Engineering degree.

Petroleum Engineering Group 2 Major Requirements

<u>Southeast Missouri State University</u>		<u>Semester</u>	<u>Missouri S&T</u>		
EN 140	Rhetoric and Critical Thinking	3	ENGLISH 1160	Writing and Research	3
US 105 or	American History I or		HISTORY 1300 or	American History to 1877 or	
US 107 or	American History II or	3	HISTORY 1310 or	American History since 1877 or	3
EH 1200 or	Modern European Civilization or		HISTORY 1200 or	Modern Western Civilization or	
PS 103	US Political Svstems		POL SCI 1200	American Government	
GO 150	Earth Science Environmental Hazard	3	GEO 1110, 1119	Physical and Environmental Geology and Lab	3
EP 261	Engineering Mechanics-Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
PHYS 242	Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
EP 263	Mechanics of Materials	4	CIV ENG 2210	Mechanics of Materials	3
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>			Maximum Free Electives	0
	Group 2 Major Requirements	13		Group 2 Major Requirements	18
	Group 1 Core Requirements	42		Group 1 Core Requirements	38
	Total Hours	55		Total Hours*	56

*S&T advisor permission is required to transfer more than 68 credits toward the S&T Petroleum Engineering degree.