

**St. Louis Community College — 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>St. Louis Community College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
MTH 210	Analytical Geometry and Calculus I	5	MATH 1214	Calculus for Engineers I	Grade of C or better is required. 4
MTH 220	Analytical Geometry and Calculus II	5	MATH 1215	Calculus for Engineers II	Grade of C or better is required. 4
MTH 230	Analytical Geometry and Calculus III	5	MATH 2222	Calculus with Analytic Geometry III	Grade of C or better is required. 4
MTH 240	Differential Equations	3	MATH 3304	Elementary Differential Equations	3
PHY 122	Engineering Physics I	5	PHYSICS 1135	Engineering Physics I	Grade of C or better is required. 4
PHY 223	Engineering Physics II	5	PHYSICS 2135	Engineering Physics II	Grade of C or better is required. 4
CHM 105	General Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
ESC 100	Engineering Computer Application and Design	3	MECH ENG 1720	Engineering Design with Computer Appl	3
ENG 101	College Composition I	3	ENGLISH 1120	Exposition and Argumentation	3
ECO 152 or ECO 151	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 37

## 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](http://ugs.mst.edu). Your campus may have additional acceptable options. Consult with your advisor or email [transfer@mst.edu](mailto:transfer@mst.edu) with questions.

## Aerospace Engineering Group 2 Major Requirements

	<u>St. Louis Community College</u>	<u>Semester</u>	<u>Missouri S&amp;T</u>		
HST 101 or HST 102 or HST 128 PSC 101	American History I or American History II or Western Tradition II or Intro to American Politics	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
ENG 102 or COM 107 or ENG 103	College Composition II or Public Speaking or Report Writing	3	ENGLISH 1160 or SPMS 1185 or ENGLISH 3560	Writing and Research or Principles of Speech or Technical Writing	3
IS 227 or ESC 101 or IS 256	C Computer Language I or Scientific Computer Programming or C++ Object Oriented Programming	3	CS 1971, 1981 or CS 1570	Intro to Programming Method and Lab (C++) or Intro to Programming (C++)	3
ESC 200	Engineering Circuits I	3	EE 2800	Circuit Analysis I	3
ESC 203	Engineering Mechanics I (Statics)	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ESC 204	Engineering Mechanics II	3	AERO ENG 2360	Dynamics	3
ESC 207	Engineering Thermodynamics	3	MECH ENG 2519	Thermodynamics	3
ESC 205	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
MTH 215	Linear Algebra	3	MATH 3108	Linear Algebra I (Will satisfy the Advanced Math/Comp Sci elective requirement.)	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	27		Group 2 Major Requirements	33
	Group 1 Core Requirements	42		Group 1 Core Requirements	37
	Total Hours	69		Total Hours*	70

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

## Architectural Engineering Group 2 Major Requirements

	<u>St. Louis Community College</u>	<u>Semester</u>	<u>Missouri S&amp;T</u>		
HST 128 or HST 101 or HST 102	Western Tradition II or American History I or American 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
ESC 203	Engineering Mechanics I (Statics)	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ESC 204	Engineering Mechanics II	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
ESC 205	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
ESC 206	Strength of Materials Lab	1	CIV ENG 2211	Materials Testing	1
CE 240	Plane Surveying	3	CIV ENG 2401	Fundamentals of Surveying	3
ENG 102 or COM 107	College Composition II or Public Speaking	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
PSI 111 or PHY 224	Intro to Astronomy or Engineering Physics III	3	PHYSICS 1505 or PHYSICS 2305	Introductory Astronomy or Intro to Modern Physics (or other chemistry, geology, biology, physics, or astronomy course that is not otherwise required for the degree) <span style="float: right;">Applies to</span>	3
	<i>No free electives applied to the degree.</i>			Maximum Free Electives	0
	Group 2 Major Requirements	22		Group 2 Major Requirements	22
	Group 1 Core Requirements	42		Group 1 Core Requirements	37
	Total Hours	64		Total Hours*	59

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

## Ceramic Engineering Group 2 Major Requirements

<u>St. Louis Community College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>	
HST 101 or HST 102 or HST 128	American History I or American History II or Western Tradition II or	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or	American History to 1877 or American History since 1877 or Modern Western Civilization or
PSC 101	Intro to American Politics		POL SCI 1200	American Government
ESC 203	Engineering Mechanics I (Statics)	3	CIV ENG 2200	Engineering Mechanics-Statics
ESC 205	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials
CHM 206, 210	Organic Chemistry I and Lab	5	CHEM 2210/2219	Organic Chemistry I and Lab <small>(Not a specific requirement. Will satisfy technical elective requirement.)</small>
CHM 106	General Chemistry II	5	CHEM 1320	General Chemistry II
ENG 102 or COM 107	College Composition II or Public Speaking	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
<i>See your advisor for course options.</i>				Maximum Free Electives
<i>No free electives applied to the degree.</i>				0
Group 2 Major Requirements		22	Group 2 Major Requirements	
Group 1 Core Requirements		42	Group 1 Core Requirements	
Total Hours		64	Total Hours*	
			60	

\*S&T advisor permission is required to transfer more than 60 credits toward the S&T Ceramic Engineering degree.

## Chemical Engineering Group 2 Major Requirements

<u>St. Louis Community College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>	
ENG 102 or ENG 103	College Composition II or Report Writing	3	ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing
HST 101 or HST 102 or HST 128	American History I or American History II or Western Tradition II or	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or	American History to 1877 or American History since 1877 or Modern Western Civilization or
PSC 101	Intro to American Politics		POL SCI 1200	American Government
CHM 106	General Chemistry II	5	CHEM 1320	General Chemistry II
CHM 206, 210	Organic Chemistry I and Lab	5	CHEM 2210	Organic Chemistry I
CHM 207, 211	Organic Chemistry II and Lab	5	CHEM 2220	Organic Chemistry II <small>(Will satisfy science elective requirement.)</small>
IS 227 or ESC 101 or IS 256	C Computer Language I or Scientific Computer Programming or C++ Object Oriented Programming	3	CS 1971, 1981 or CS 1570	Intro to Programming Method and Lab (C++) or Intro to Programming (C++)
<i>See your advisor for course options.</i>				Humanities/Social Science Elective
<i>See your advisor for course options.</i>				Humanities/Social Science Elective
<i>No free electives applied to the degree.</i>				Maximum Free Electives
Group 2 Major Requirements		24	Group 2 Major Requirements	
Group 1 Core Requirements		42	Group 1 Core Requirements	
Total Hours		66	Total Hours*	
			63	

\*S&T advisor permission is required to transfer more than 63 credits toward the S&T Chemical Engineering degree.

## Chemical Engineering - Biochemical Engineering Emphasis Group 2 Major Requirements

<u>St. Louis Community College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>	
ENG 102 or ENG 103	College Composition II or Report Writing	3	ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing
HST 101 or HST 102 or HST 128	American History I or American History II or Western Tradition II or	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or	American History to 1877 or American History since 1877 or Modern Western Civilization or
PSC 101	Intro to American Politics		POL SCI 1200	American Government
CHM 106	General Chemistry II	5	CHEM 1320	General Chemistry II
CHM 206, 210	Organic Chemistry I and Lab	5	CHEM 2210	Organic Chemistry I
CHM 207, 211	Organic Chemistry II and Lab	5	CHEM 2220	Organic Chemistry II <small>(Will satisfy science elective requirement.)</small>
IS 227 or ESC 101 or IS 256	C Computer Language I or Scientific Computer Programming or C++ Object Oriented Programming	3	CS 1971, 1981 or CS 1570	Intro to Programming Method and Lab (C++) or Intro to Programming (C++)
<i>See your advisor for course options.</i>				Humanities/Social Science Elective
<i>See your advisor for course options.</i>				Humanities/Social Science Elective
<i>No free electives applied to the degree.</i>				Maximum Free Electives
Group 2 Major Requirements		24	Group 2 Major Requirements	
Group 1 Core Requirements		42	Group 1 Core Requirements	
Total Hours		66	Total Hours*	
			63	

\*S&T advisor permission is required to transfer more than 71 credits toward the S&T Chemical/Biochemical Engineering degree.

## Civil Engineering Group 2 Major Requirements

<u>St. Louis Community College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
ENG 102 or COM 107 or ENG 103	College Composition II or Public Speaking or Report Writing	3	ENGLISH 1160 or SPMS 1185 or ENGLISH 3560	Writing and Research or Public Speaking or Technical Writing	3
HST 101 or HST 102 or HST 128	American History I or American History II or Western Tradition II or	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or	American History to 1877 or American History since 1877 or Modern Western Civilization or	3
PSC 101	Intro to American Politics		POL SCI 1200	American Government	
GEO 111	Physical Geology	3	GEO 1110/GE 1150	Intro to Physical Geology	3
ESC 203	Engineering Mechanics I (Statics)	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ESC 204	Engineering Mechanics II	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
ESC 205	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
ESC 206	Strength of Materials Lab	1	CIV ENG 2211	Materials Testing	1
CE 240	Plane Surveying	3	CIV ENG 2401	Fundamentals of Surveying	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	22		Group 2 Major Requirements	25
	Group 1 Core Requirements	42		Group 1 Core Requirements	37
	Total Hours	64		Total Hours*	62

\*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

<u>St. Louis Community College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
COM 107	Public Speaking	3	SPMS 1185	Public Speaking	3
ENG 102 or ENG 103	College Composition II or Report Writing	3	ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing	3
HST 101 or HST 102 or HST 128	American History I or American History II or Western Tradition II or	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or	American History to 1877 or American History since 1877 or Modern Western Civilization or	3
PSC 101	Intro to American Politics		POL SCI 1200	American Government	
MTH 212	Discrete Mathematics	3	CS 1200	Discrete Math for Computer Science	3
ESC 101 or IS 256	Scientific Computer Programming or C++ Object-Oriented Programming	3	CS 1570	Intro to Programming (C++)	3
IS 275	Advanced C++ Programming	3	CS 1575	Data Structures	3
ESC 203 & ESC 204	Engineering Mechanics I (Statics) & Engineering Mechanics II	6	CIV ENG 2200 and MECH ENG 2350	Engineering Mechanics-Statics and Engineering Mechanics-Dynamics <small>(Both courses combined will satisfy a required engineering science elective.)</small>	6
ESC 200	Engineering Circuits I	3	EE 2100**	Circuits I <small>**A passing grade on the Missouri S&amp;T EE Advancement Exam I is required to receive credit for EE 2100.</small>	3
MTH 215	Linear Algebra	3	MATH 3108	Linear Algebra <small>(Will satisfy a required math elective.)</small>	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	30		Group 2 Major Requirements	36
	Group 1 Core Requirements	42		Group 1 Core Requirements	37
	Total Hours	72		Total Hours*	73

\*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

<u>St. Louis Community College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
COM 107	Public Speaking	3	SPMS 1185	Public Speaking	3
ENG 102 or ENG 103	College Composition II or Report Writing	3	ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing	3
HST 101 or HST 102 or HST 128	American History I or American History II or Western Tradition II or	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or	American History to 1877 or American History since 1877 or Modern Western Civilization or	3
PSC 101	Intro to American Politics		POL SCI 1200	American Government	
ESC 101 or IS 256	Scientific Computer Programming or C++ Object-Oriented Programming	3	CS 1570	Intro to Programming (C++)	3
ESC 203 & ESC 204	Engineering Mechanics I (Statics) & Engineering Mechanics II	6	CIV ENG 2200 and MECH ENG 2350	Engineering Mechanics-Statics and Engineering Mechanics-Dynamics <small>(Both courses combined will satisfy a required engineering science elective.)</small>	6
ESC 200	Engineering Circuits I	3	EE 2100**	Circuits I <small>**A passing grade on the Missouri S&amp;T EE Advancement Exam I is required to receive credit for EE 2100.</small>	3
MTH 215	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	24		Group 2 Major Requirements	30
	Group 1 Core Requirements	42		Group 1 Core Requirements	37
	Total Hours	66		Total Hours*	67

\*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>St. Louis Community College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
PSY 200	General Psychology I	3	PSYCH 1101	General Psychology	3
HST 101 or HST 102 or HST 128	American History I or American History II or Western Tradition II or	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or	American History to 1877 or American History since 1877 or Modern Western Civilization or	3
PSC 101	Intro to American Politics		POL SCI 1200	American Government	
ENG 102 or COM 107 or ENG 103	College Composition II or Public Speaking or Report Writing	3	ENGLISH 1160 or SPMS 1185 or ENGLISH 3560	Writing and Research or Principles of Speech or Technical Writing	3
ESC 200	Engineering Circuits I	3	EE 2800	Circuit Analysis I	3
ESC 203	Engineering Mechanics I (Statics)	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ESC 204	Engineering Mechanics II	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
ESC 202	Thermal Analysis	3	MECH 2527	Thermal Analysis	3
ESC 205	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
ESC 206	Strength of Materials Lab	1	CIV ENG 2211	Materials Testing	1
<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		37
Total Hours		67	Total Hours*		68

\*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>St. Louis Community College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
ENG 102 or COM 107 or ENG 103	College Composition II or Public Speaking or Report Writing	3	ENGLISH 1160 or SPMS 1185 or ENGLISH 3560	Writing and Research or Public Speaking or Technical Writing	3
HST 101 or HST 102 or HST 128	American History I or American History II or Western Tradition II	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200	American History to 1877 (preferred) or American History since 1877 (preferred) or Modern Western Civilization	3
GEO 111	Physical Geology	3	GEO 1110/GE 1150	Intro to Physical Geology	3
CHM 106	General Chemistry II	5	CHEM 1320	General Chemistry II	3
BIO 140	Principles of Biology I	3	BIO SCI 1113	General Biology	4
ESC 203	Engineering Mechanics I (Statics)	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ESC 204	Engineering Mechanics II	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
ESC 205	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
ESC 206	Strength of Materials Lab	1	CIV ENG 2211	Materials Testing	1
<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		27	Group 2 Major Requirements		29
Group 1 Core Requirements		42	Group 1 Core Requirements		37
Total Hours		69	Total Hours*		66

\*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>St. Louis Community College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
ENG 102 or COM 107 or ENG 103	College Composition II or Public Speaking or Report Writing	3	ENGLISH 1160 or SPMS 1185 or ENGLISH 3560	Writing and Research or Public Speaking or Technical Writing	3
HST 101 or HST 102 or HST 128	American History I or American History II or Western Tradition II or	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or	American History to 1877 or American History since 1877 or Modern Western Civilization or	3
PSC 101	Intro to American Politics		POL SCI 1200	American Government	
GEO 111	Physical Geology	3	GEO 1110/GEO 1119	Physical and Environmental Geology and Lab	5
ESC 203	Engineering Mechanics I (Statics)	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ESC 204	Engineering Mechanics II	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
ESC 205	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
BIO 140 or CHM 106 or CHM 206/210	Principles of Biology I or General Chemistry II or Organic Chemistry I	3	BIO SCI 1113 or CHEM 1320 or CHEM 2210	General Biology or General Chemistry II or Organic Chemistry I	
<i>See your advisor for course options.</i>			or any 3-hour course in chemistrv, aeochemistrv, or biologv		
<i>See your advisor for course options.</i>			Humanities/Social Science Elective		3
<i>No free electives applied to the degree.</i>			Humanities/Social Science Elective		3
<i>No free electives applied to the degree.</i>			Maximum Free Electives		0
Group 2 Major Requirements		21	Group 2 Major Requirements		26
Group 1 Core Requirements		42	Group 1 Core Requirements		37
Total Hours		63	Total Hours*		63

\*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

<u>St. Louis Community College</u>	<u>Semester</u>	<u>Missouri S&amp;T</u>	
HST 101 or HST 102 or HST 128	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or	3
PSC 101		POL SCI 1200	
ENG 102 or COM 107 or ENG 103	3	ENGLISH 1160 or SPMS 1185 or ENGLISH 3560	3
IS 227 or ESC 101 or IS 256	3	CS 1971, 1981 or CS 1570	3 3
ESC 200	3	EE 2800	3
ESC 203	3	CIV ENG 2200	3
ESC 204	3	MECH ENG 2360	3
ESC 207	3	MECH ENG 2519	3
ESC 205	3	CIV ENG 2210	3
MTH 215	3	MATH 3108	3
ME 249	3	MET ENG 2110	3
			3
			3
			3
			0
	21		27
	42		37
Total Hours	63		Total Hours* 64

\*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

<u>St. Louis Community College</u>	<u>Semester</u>	<u>Missouri S&amp;T</u>	
ENG 102 or COM 107 or ENG 103	3	ENGLISH 1160 or SPMS 1185 or ENGLISH 3560	3
HST 101 or HST 102 or HST 128	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or	3
PSC 101		POL SCI 1200	
ESC 203	3	CIV ENG 2200	3
ESC 205	3	CIV ENG 2210	3
ME 249	3	MET ENG 2110	3
CHM 106	5	CHEM 1320	3
CHM 206, 210 or ESC 200	5	CHEM 2210 or EE 2800	3
			3
			3
			3
			5
	25		32
	42		37
Total Hours	67		Total Hours* 69

\*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>St. Louis Community College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
ENG 102 or ENG 103	College Composition II or Report Writing	3	ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing	3
HST 101 or HST 102 or HST 128	American History I or American History II or Western Tradition II or Intro to American Politics	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
ESC 203	Engineering Mechanics I (Statics)	3	CIV ENG 2200*	Engineering Mechanics-Statics	3
ESC 204	Engineering Mechanics II	3	MECH ENG 2350*	Engineering Mechanics-Dynamics	3
ESC 205	Mechanics of Materials	3	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					
GEO 111	Physical Geology	3	GEO 1110/GE 1150	Intro to Physical Geology	3
				Humanities/Social Science Elective	3
				Humanities/Social Science Elective	3
				Maximum Free Electives	0
		18			24
		42			37
Total Hours		60			61

\*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>St. Louis Community College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
ENG 102 or ENG 103	College Composition II or Report Writing	3	ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing	3
HST 101 or HST 102 or HST 128	American History I or American History II or Western Tradition II or Intro to American Politics	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
IS 227 or ESC 101 or IS 256	C Computer Language I or Scientific Computer Programming or C++ Object Oriented Programming	3	CS 1971, 1981 or CS 1570	Intro to Programming Method and Lab (C++) or Intro to Programming (C++)	3
ESC 203	Engineering Mechanics I (Statics)	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ESC 205	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
ME 249	Materials and Metallurgy	3	MET ENG 2110	Metallurgy for Engineers	3
				Humanities/Social Science Elective	3
				Humanities/Social Science Elective	3
				Maximum Free Electives	6
		18			27
		42			37
Total Hours		60			64

\*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>St. Louis Community College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
ENG 102 or ENG 103	College Composition II or Report Writing	3	ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing	3
HST 101 or HST 102 or HST 128	American History I or American History II or Western Tradition II or Intro to American Politics	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
GEO 111	Physical Geology	3	GEO 1110/GEO 1119	Physical and Environmental Geology and Lab	3
ESC 203	Engineering Mechanics I (Statics)	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ESC 204	Engineering Mechanics II	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
ESC 205	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
ESC 202	Thermal Analysis	3	MECH ENG 2527	Thermal Analysis	3
				Humanities/Social Science Elective	3
				Humanities/Social Science Elective	3
				Maximum Free Electives	0
		15			21
		42			37
Total Hours		57			58

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