

# Lincoln Land Community College — Missouri S&T

## General Engineering Transfer Guide

Effective as of Fall 2021

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

<u>Lincoln Land Community College</u>			<u>Semester</u>	<u>Missouri S&amp;T</u>			
MAT 131	Calculus and Analytical Geometry I	5	MATH 1214	Calculus for Engineers I	4	Grade of C or better is required.	
MAT 132	Calculus and Analytical Geometry II	5	MATH 1215	Calculus for Engineers II	4	Grade of C or better is required.	
MAT 233	Calculus and Analytical Geometry III	4	MATH 2222	Calculus with Analytic Geometry III	4	Grade of C or better is required.	
MAT 235	Differential Equations	4	MATH 3304	Elementary Differential Equations	3		
PHY 201	Physics I	4	PHYSICS 1135	Engineering Physics I	4	Grade of C or better is required.	
PHY 202 and PHY 203	Physics II and Physics III	8	PHYSICS 2135	Engineering Physics II	4	Grade of C or better is required.	
CHE 101	General Chemistry	4	CHEM 1310, 1319	General Chemistry I and Lab	5		
EGL 101	Composition I	3	ENGLISH 1120	Exposition and Argumentation	3		
ECO 131 or ECO 132	Principles of Economics I-Microeconomics or Principles of Economics II-Macroeconomics	3	ECON 1100 or ECON 1200	Principles of Microeconomics or Principles of Macroeconomics	3		
Total Hours			40			Total Hours 34	

### 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

**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

**Humanities/Social Science (HSS) Electives:** HSS electives may include any history, economics, political science, sociology, psychology, philosophy, fine art, literature, or foreign language.

### Aerospace Engineering Group 2 Major Requirements

<u>Lincoln Land Community College</u>			<u>Semester</u>	<u>Missouri S&amp;T</u>		
HIS 111 or HIS 112 or HIS 102 or POS 101	United States History to 1877 or United States History Since 1877 or History of Western Civilization or 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	
EGL 102 or CMN 101	Composition II or Fundamentals of Speech	3	ENGLISH 1160 or SP&MS 1185	Writing and Research or Principles of Speech	3	
CPC 120	C++ Programming Level I	3	CS 1971, 1981 or EE 2800	Intro to Programming Method and Lab (C++) Circuit Analysis I	3	
ENG 270	Circuit Analysis	3	CIV ENG 2200	Engineering Mechanics-Statics	3	
ENG 220	Applied Mechanics (Statics)	3	CIV ENG 2210	Mechanics of Materials	3	
ENG 240	Mechanics of Materials	4	MATH 3108	Linear Algebra I (Will satisfy the Advanced Math/Comp Sci elective requirement.)	3	
MAT 215	Intro to Linear Algebra	3				
EGL 201 or EGL 210 or EGL 147	Survey of British Literature I or Survey of American Literature: Colonial Era to Civil War or Women's Literature	3	ENGLISH 1211 or ENGLISH 1221 or ENGLISH 2242	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or Literature by Women (or other literature elective)	3	
<i>See your advisor for course options.</i>			<b>Ethics Elective</b>			3
<i>No free electives applied to the degree.</i>			<b>Maximum Free Electives</b>			0
<b>Group 2 Major Requirements</b>			<b>Group 2 Major Requirements</b>			27
<b>Group 1 Core Requirements</b>			<b>Group 1 Core Requirements</b>			34
Total Hours			65			Total Hours* 61

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

## Architectural Engineering Group 2 Major Requirements

Lincoln Land Community College		Semester	Missouri S&T		
HIS 102 or HIS 111 or HIS 112	History of Western Civilization or United States History to 1877 or United States History Since 1877	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
ENG 220	Applied Mechanics (Statics)	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENG 221	Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
ENG 240	Mechanics of Materials	4	CIV ENG 2210	Mechanics of Materials	3
BDM 120	Surveying and Building Layout	3	CIV ENG 2401	Fundamentals of Surveying	3
EGL 102 or CMN 101	Composition II or Fundamentals of Speech	3	ENGLISH 1160 or SP&MS 1185 or HSS Elective	Writing and Research or Principles of Speech or Humanities/Social Science Elective: history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language	3
ACT 113	Architectural and Construction History	3	ART 3203	Architectural Design I	3
GEO 101	Physical Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	26		Group 2 Major Requirements	24
	Group 1 Core Requirements	40		Group 1 Core Requirements	34
	<b>Total Hours</b>	<b>66</b>		<b>Total Hours*</b>	<b>58</b>

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

## Ceramic Engineering Group 2 Major Requirements

Lincoln Land Community College		Semester	Missouri S&T		
HIS 111 or HIS 112 or HIS 102 or POS 101	United States History to 1877 or United States History Since 1877 or History of Western Civilization or 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 220	Applied Mechanics (Statics)	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENG 240	Mechanics of Materials	4	CIV ENG 2210	Mechanics of Materials	3
CHE 201	Organic Chemistry I	5	CHEM 2210, 2219	Organic Chemistry I and Lab (4 or 5) <small>(Not a specific requirement. Will satisfy the advanced chemistry elective requirement.)</small>	3
CHE 102	General Chemistry II	4	CHEM 1320	General Chemistry II	3
EGL 102 or CMN 101	Composition II or Fundamentals of Speech	3	ENGLISH 1160 or SP&MS 1185 or HSS Elective	Writing and Research or Principles of Speech or Humanities/Social Science Elective: history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language	3
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	22		Group 2 Major Requirements	21
	Group 1 Core Requirements	40		Group 1 Core Requirements	34
	<b>Total Hours</b>	<b>62</b>		<b>Total Hours*</b>	<b>55</b>

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

## Chemical Engineering Group 2 Major Requirements

Lincoln Land Community College		Semester	Missouri S&T		
EGL 102	Composition II	3	ENGLISH 1160	Writing and Research	3
HIS 111 or HIS 112 or HIS 102 or POS 101	United States History to 1877 or United States History Since 1877 or History of Western Civilization or 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
CHE 102	General Chemistry II	4	CHEM 1320	General Chemistry II	3
CHE 201	Organic Chemistry I	5	CHEM 2210	Organic Chemistry I	4
CHE 202	Organic Chemistry II	5	CHEM 2220, 2219	Organic Chemistry II <small>(Will satisfy science elective requirement. Select up to 9 hours from these options.)</small>	9
MAT 161 or CPC 120	Computer Programming and Applications for Engineers or C++ Programming Level I	3	CS 1500 or CS 1971, 1981	Computational Problem Solving or Intro to Programming Method and Lab (C++) or	3
CMN 101	Fundamentals of Speech	3	SP&MS 1185	Principles of Speech	3
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	26		Group 2 Major Requirements	31
	Group 1 Core Requirements	40		Group 1 Core Requirements	34
	<b>Total Hours</b>	<b>66</b>		<b>Total Hours*</b>	<b>65</b>

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

## Chemical Engineering - Biochemical Engineering Emphasis

Chemical Engineering - Biochemical Engineering Emphasis						
Lincoln Land Community College			Semester	Missouri S&T		
EGL 102	Composition II	3		ENGLISH 1160	Writing and Research	3
HIS 111 or HIS 112 or HIS 102 or POS 101	United States History to 1877 or United States History Since 1877 or History of Western Civilization or 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
CHE 102	General Chemistry II	4		CHEM 1320	General Chemistry II	3
CHE 201	Organic Chemistry I	5		CHEM 2210	Organic Chemistry I	4
CHE 202	Organic Chemistry II	5		CHEM 2220, 2229	Organic Chemistry II and Lab (Will satisfy science elective requirement. Select up to 9 hours from these options.)	4
MAT 161 or CPC 120	Computer Programming and Applications for Engineers or C++ Programming Level I	3		CS 1500 or CS 1971, 1981	Computational Problem Solving (3) or Intro to Programming Method and Lab (C++)	3
CMN 101	Fundamentals of Speech	3		SP&MS 1185	Principles of Speech	3
	<i>See your advisor for course options.</i>				Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0			Maximum Free Electives	0
	Group 2 Major Requirements	26			Group 2 Major Requirements	26
	Group 1 Core Requirements	40			Group 1 Core Requirements	34
	Total Hours	66			Total Hours*	60

\*S&T advisor permission is required to transfer more than 7 credits toward the S&T Chemical/Biochemical Engineering degree.

## Civil Engineering Group 2 Major Requirements

Civil Engineering Group 2 Major Requirements						
Lincoln Land Community College			Semester	Missouri S&T		
EGL 102 or CMN 101	Composition II or Fundamentals of Speech	3		ENGLISH 1160 or SP&MS 1185	Writing and Research or Principles of Speech	3
HIS 111 or HIS 112 or HIS 102 or POS 101	United States History to 1877 or United States History Since 1877 or History of Western Civilization or 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 101	Physical Geology	4		GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
ENG 220	Applied Mechanics (Statics)	3		CIV ENG 2200	Engineering Mechanics-Statics	3
ENG 221	Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics	3
ENG 240	Mechanics of Materials	4		CIV ENG 2210	Mechanics of Materials	3
BDM 120	Surveying and Building Layout	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>	0			Maximum Free Electives	0
	Group 2 Major Requirements	23			Group 2 Major Requirements	24
	Group 1 Core Requirements	40			Group 1 Core Requirements	34
	Total Hours	63			Total Hours*	58

\*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

Computer Engineering Group 2 Major Requirements						
Lincoln Land Community College			Semester	Missouri S&T		
CMN 101	Fundamentals of Speech	3		SP&MS 1185	Principles of Speech	3
EGL 102	Composition II	3		ENGLISH 1160	Writing and Research	3
HIS 111 or HIS 112 or HIS 102 or POS 101	United States History to 1877 or United States History Since 1877 or History of Western Civilization or 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
MAT 220	Discrete Structures	3		CS 1200	Discrete Math for Computer Science	3
MAT 161 or CPC 120	Computer Programming and Applications for Engineers or C++ Programming Level I	3		CS 1500 or CS 1971,1981	Computational Problem Solving or Intro to Programming Methodology and Lab (C++)	3
ENG 220 and ENG 221 OR CHE 201	Applied Mechanics (Statics) and Dynamics OR Organic Chemistry I (5)	3		CIV ENG 2200 and MECH ENG 2350 (BOTH of the courses above or ONE of the courses below.) OR CHEM 2210, 2219	Engineering Mechanics-Statics (3) and Engineering Mechanics-Dynamics (3) (Both courses above combined or any one of the following courses will satisfy a required engineering science elective.) OR Organic Chemistry I and Lab (4)	3
ENG 270	Circuit Analysis	3		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
MAT 215	Intro to 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>	0			Maximum Free Electives	3
	Group 2 Major Requirements	24			Group 2 Major Requirements	30
	Group 1 Core Requirements	40			Group 1 Core Requirements	34
	Total Hours	64			Total Hours*	64

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

## Electrical Engineering Group 2 Major Requirements

<u>Lincoln Land Community College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
CMN 101	Fundamentals of Speech	3	SP&MS 1185	Principles of Speech	3
EGL 102	Composition II	3	ENGLISH 1160	Writing and Research	3
HIS 111 or HIS 112 or HIS 102 or POS 101	United States History to 1877 or United States History Since 1877 or History of Western Civilization or 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
MAT 161	Computer Programming and Applications for Engineers	3	CS 1500	Computational Problem Solving	3
ENG 220 and ENG 221 OR CHE 201	Applied Mechanics (Statics) and Dynamics OR Organic Chemistry I (5)	3	CIV ENG 2200 and MECH ENG 2350 (BOTH of the courses above or ONE of the courses below.) OR CHEM 2210, 2219	Engineering Mechanics-Statics (3) and Engineering Mechanics-Dynamics (3) (Both courses above combined or any one of the following courses will satisfy a required engineering science elective.) OR Organic Chemistry I and Lab (4)	3
ENG 270	Circuit Analysis	3	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
MAT 215	Intro to 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	21		Group 2 Major Requirements	27
	Group 1 Core Requirements	40		Group 1 Core Requirements	34
	Total Hours	61		Total Hours*	61

\*\*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>Lincoln Land Community College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
PSY 101	Intro to Psychology	3	PSYCH 1101	General Psychology	3
HIS 111 or HIS 112 or HIS 102 or POS 101	United States History to 1877 or United States History Since 1877 or History of Western Civilization or 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
EGL 102 or CMN 101	Composition II or Fundamentals of Speech	3	ENGLISH 1160 or SP&MS 1185	Writing and Research or Principles of Speech	3
CPC 120	C++ Programming Level I	3	CS 1971, 1981	Intro to Programming Methodolgy and Lab (C++)	3
ENG 270	Circuit Analysis	3	EE 2800	Circuit Analysis I	3
ENG 220	Applied Mechanics (Statics)	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENG 221	Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
IND 199	Thermodynamics	3	MECH 2527	Thermal Analysis	3
ENG 240	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>			Maximum Free Electives	3
	Group 2 Major Requirements	28		Group 2 Major Requirements	33
	Group 1 Core Requirements	40		Group 1 Core Requirements	34
	Total Hours	68		Total Hours*	67

\*\*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>Lincoln Land Community College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
EGL 102 or CMN 101	Composition II or Fundamentals of Speech	3	ENGLISH 1160 or SP&MS 1185	Writing and Research or Principles of Speech	3
HIS 111 or HIS 112 or HIS 102	United States History to 1877 or United States History Since 1877 or History of Western Civilization	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200	American History to 1877 or American History since 1877 or Modern Western Civilization	3
GEO 101	Physical Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
CHE 102	General Chemistry II	4	CHEM 1320	General Chemistry II	3
BIO 101	General Biology	4	BIO SCI 1113	General Biology	4
ENG 220	Applied Mechanics (Statics)	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENG 221	Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
ENG 240	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>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	28		Group 2 Major Requirements	28
	Group 1 Core Requirements	40		Group 1 Core Requirements	34
	Total Hours	68		Total Hours*	62

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

## Geological Engineering Group 2 Major Requirements

Lincoln Land Community College		Semester	Missouri S&T		
EGL 102 or CMN 101	Composition II or Fundamentals of Speech	3	ENGLISH 1160 or SP&MS 1185	Writing and Research or Principles of Speech	3
HIS 111 or HIS 112 or HIS 102 or POS 101	United States History to 1877 or United States History Since 1877 or History of Western Civilization or 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 101	Physical Geology	4	GEO ENG 1150 (GEOLOGY 1110)	Physical and Environmental Geology	3
ENG 220	Applied Mechanics (Statics)	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENG 221	Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
ENG 240	Mechanics of Materials	4	CIV ENG 2210	Mechanics of Materials	3
BIO 101 or CHE 102 or CHE 201	General Biology or General Chemistry II or Organic Chemistry I	4	BIO SCI 1113 or CHEM 1320 or CHEM 2210	General Biology or General Chemistry II or Organic Chemistry I <small>or any 3-hour course in chemistry, geochemistry, or biology. Satisfies chemistry/geochemistry elective requirement.</small>	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>	0		Maximum Free Electives	0
	Group 2 Major Requirements	24		Group 2 Major Requirements	27
	Group 1 Core Requirements	40		Group 1 Core Requirements	34
	Total Hours	64		Total Hours*	61

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

## Mechanical Engineering Group 2 Major Requirements

Lincoln Land Community College		Semester	Missouri S&T		
HIS 111 or HIS 112 or HIS 102 or POS 101	United States History to 1877 or United States History Since 1877 or History of Western Civilization or 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
EGL 102 or CMN 101	Composition II or Fundamentals of Speech	3	ENGLISH 1160 or SP&MS 1185	Writing and Research or Principles of Speech	3
CPC 120	C++ Programming Level I	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
ENG 270	Circuit Analysis	3	EE 2800	Circuit Analysis I	3
ENG 220	Applied Mechanics (Statics)	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENG 240	Mechanics of Materials	4	CIV ENG 2210	Mechanics of Materials	3
MAT 215	Intro to Linear Algebra	3	MATH 3108	Linear Algebra I <small>(Will satisfy the Advanced Math/Computer Science elective requirement.)</small>	3
EGL 201 or EGL 210 or EGL 147	Survey of British Literature I or Survey of American Literature: Colonial Era to Civil War or Women's Literature	3	ENGLISH 1211 or ENGLISH 1221 or ENGLISH 2242 or	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or Literature by Women or <small>(or other literature elective)</small>	3
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	25		Group 2 Major Requirements	27
	Group 1 Core Requirements	40		Group 1 Core Requirements	34
	Total Hours	65		Total Hours*	61

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

## Metallurgical Engineering Group 2 Major Requirements

Lincoln Land Community College		Semester	Missouri S&T		
EGL 102 or CMN 101	Composition II or Fundamentals of Speech	3	ENGLISH 1160 or SP&MS 1185	Writing and Research or Principles of Speech	3
HIS 111 or HIS 112 or HIS 102 or POS 101	United States History to 1877 or United States History Since 1877 or History of Western Civilization or 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 220	Applied Mechanics (Statics)	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENG 240	Mechanics of Materials	4	CIV ENG 2210	Mechanics of Materials	3
CHE 102	General Chemistry II	4	CHEM 1320	General Chemistry II	3
CHE 201 or ENG 270	Organic Chemistry I or Circuit Analysis	3	CHEM 2210, 2219 or EE 2800	Organic Chemistry I (4) or Electrical Circuits (3) <small>Not specifically required for the degree but will satisfy Out-of-Department Technical Elective Requirement.</small>	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>	5		Maximum Free Electives	5
	Group 2 Major Requirements	25		Group 2 Major Requirements	29
	Group 1 Core Requirements	40		Group 1 Core Requirements	34
	Total Hours	65		Total Hours*	63

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

## Mining Engineering Group 2 Major Requirements

<u>Lincoln Land Community College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
EGL 102	Composition II	3	ENGLISH 1160	Writing and Research	3
HIS 111 or HIS 112 or HIS 102 or POS 101	United States History to 1877 or United States History Since 1877 or History of Western Civilization or 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 220	Applied Mechanics (Statics)	3	CIV ENG 2200*	Engineering Mechanics-Statics	3
ENG 221	Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
ENG 240	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 2200 and 2210 and MECH ENG 2350 will be substituted for MI ENG 3812.					
GEO 101	Physical Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental 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>		0		Maximum Free Electives	0
Group 2 Major Requirements		20		Group 2 Major Requirements	24
Group 1 Core Requirements		40		Group 1 Core Requirements	34
Total Hours		60		Total Hours*	58

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

## Nuclear Engineering Group 2 Major Requirements

<u>Lincoln Land Community College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
EGL 102	Composition II	3	ENGLISH 1160	Writing and Research	3
HIS 111 or HIS 112 or HIS 102 or POS 101	United States History to 1877 or United States History Since 1877 or History of Western Civilization or 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
MAT 215	Intro to Linear Algebra	3	MATH 3108	Linear Algebra	3
ENG 220	Applied Mechanics (Statics)	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENG 240	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>		6		Maximum Free Electives	6
Group 2 Major Requirements		22		Group 2 Major Requirements	27
Group 1 Core Requirements		40		Group 1 Core Requirements	34
Total Hours		62		Total Hours*	61

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

## Petroleum Engineering Group 2 Major Requirements

<u>Lincoln Land Community College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
EGL 102	Composition II	3	ENGLISH 1160	Writing and Research	3
HIS 111 or HIS 112 or HIS 102 or POS 101	United States History to 1877 or United States History Since 1877 or History of Western Civilization or 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 101	Physical Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
ENG 220	Applied Mechanics (Statics)	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENG 221	Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
ENG 240	Mechanics of Materials	4	CIV ENG 2210	Mechanics of Materials	3
IND 199	Thermodynamics	3	MECH ENG 2527	Thermal Analysis	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>		0		Maximum Free Electives	0
Group 2 Major Requirements		23		Group 2 Major Requirements	27
Group 1 Core Requirements		40		Group 1 Core Requirements	34
Total Hours		63		Total Hours*	61

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

