## Lincoln Land 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.

	Lincoln Land Community College	Se	<u>emester</u>	Missouri S&T	
MAT 131	Calculus and Analytical Geometry I	5	MATH 1214	Calculus for Engineers I Grade of C or better is required.	4
MAT 132	Calculus and Analytical Geometry II	5	MATH 1215	Calculus for Engineers II Grade of C or better is required.	4
MAT 233	Calculus and Analytical Geometry III	4	MATH 2222	Calculus with Analytic Geometry III  Grade of C or better is required.	4
MAT 235	Differential Equations	4	MATH 3304	Elementary Differential Equations	3
PHY 201	Physics I	4	PHYSICS 1135	Engineering Physics I Grade of C or better is required.	4
PHY 202 and	Physics II and	0			1
PHY 203	Physics III	0	PHYSICS 2135	Engineering Physics II Grade of C or better is required.	4
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	Principles of Economics I-Microeconomics or	0	ECON 1100 or	Principles of Microeconomics or	2
ECO 132	Principles of Economics II-Macroeconomics	3	ECON 1200	Principles of Macroeconomics	3
	Total Hou	rs 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 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.

	Lincoln Land Community College	<u>Se</u> i	<u>mester</u>	<u>Missouri S&amp;T</u>	
HIS 111 or	United States History to 1877 or		HISTORY 1300 or	American History to 1877 or	
HIS 112 or	United States History Since 1877 or	3	HISTORY 1310 or	American History since 1877 or	3
HIS 102 or	History of Western Civilization or	3	HISTORY 1200 or	Modern Western Civilization or	3
POS 101	American Politics		POL SCI 1200	American Government	
EGL 102 or	Composition II or	3	ENGLISH 1160 or	Writing and Research or	3
CMN 101	Fundamentals of Speech	3	SPMS 1185	Principles of Speech	3
CPC 120 or	C++ Programming Level I or		CS 1971, 1981 or	Intro to Programming Method and Lab (C++) or	3
MAT 161	Computer Programming and Application	3	CS 1570	Intro to Programming (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 (Will satisfy the Advanced Math/Comp Sci elective requirement.)	3
	See your advisor for course options.			Literature Elective	3
	See your advisor for course options.			Ethics Elective	3
	No free electives applied to the degree.			Maximum Free Electives	0
	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* "S&I advisor permission is required to transfer more than 68 credits toward the S&T Aerospace Engineering degree.	61

	Architectural Engineering Group 2 Major Requirements										
	Lincoln Land Community College		Semester	<u>Missouri S&amp;T</u>							
HIS 102 or HIS 111 or HIS 112	History of Western Civilizationor U States History to 1877 or United States History Since 1877	Inited 1 3	HISTORY 1200* (or HISTORY 1300 or HISTORY 1310)	Modern Western Civilization* (or American History to 1877 or American History since 1877) *HISTORY 1200 is preferred; 1300 or 1310 will also be accepted.	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						
EGL 102 or CMN 101	Composition II or Fundamentals of Speech	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						
	No free electives applied to the degree.		_	Maximum Free Electives	0						
	Group 2 Major Requirements Group 1 Core Requirements Total	16 40 Hours 56		Group 2 Major Requirements Group 1 Core Requirements  Total Hours*  "S&I advisor permission is required to transfer more than 68 credits toward the S&T Architectural Engineering degree.	15 34 49						

	Ceramic Engine	erii	ng Group 2 Majo	r 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 (Not a specific requirement. Will satisfy technical elective requirement.)	5
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 SPMS 1185 or HSS Elective	Writing and Research or Public Speaking or Humanities/Social Science Elective: history, economics, political science, sociology, psychology,	3
	See your advisor for course options.			Humanities/Social Science Elective	3
	No free electives applied to the degree.			Maximum Free Electives	0
	Group 2 Major Requirements Group 1 Core Requirements Total Hours	22 40 62		Group 2 Major Requirements Group 1 Core Requirements  Total Hours*  "S&I advisor permission is required to transfer more than 68 credits toward the S&T Ceramic Engineering degree.	23 34 57

	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	United States History to 1877 or		HISTORY 1300 or	American History to 1877 or							
HIS 112 or	United States History Since 1877 or	3	HISTORY 1310 or	American History since 1877 or	3						
HIS 102 or	History of Western Civilization or	3	HISTORY 1200 or	Modern Western Civilization or	3						
POS 101	American Politics		POL SCI 1200	American Government							
CHE 102	General Chemistry II	4	CHEM 1320	General Chemistry II	5						
CHE 201	Organic Chemistry I	5	CHEM 2210	Organic Chemistry I	3						
CHE 202	Organic Chemistry II	5	CHEM 2220	Organic Chemistry II (Will satisfy science elective requirement.)	3						
CPC 120 or	C++ Programming Level I or		CS 1971, 1981 or	Intro to Programming Method and Lab (C++) or	2						
MAT 161	Computer Programming and Application	3	CS 1570	Intro to Programming (C++)	3						
	See your advisor for course options.			Humanities/Social Science Elective	3						
	See your advisor for course options.			Humanities/Social Science Elective	3						
	No free electives applied to the degree.			Maximum Free Electives	0						
	Group 2 Major Requirements	23		Group 2 Major Requirements	26						
	Group 1 Core Requirements	40		Group 1 Core Requirements	34						
	Total Hours	63		Total Hours* "S&I advisor permission is required to transfer more than 69 credits toward the S&T Chemical Engineering degree.	60						

	Chemical Engineering - Biochemical Engineering Emphasis  Group 2 Major Requirements									
	Lincoln Land Community College	Semeste	<b>-</b>	Missouri S&T						
EGL 102 HIS 111 or	Composition II United States History to 1877 or	3	ENGLISH 1160 HISTORY 1300 or	Writing and Research American History to 1877 or	3					
HIS 112 or HIS 102 or POS 101	United States History Since 1877 or History of Western Civilization or American Politics	3	HISTORY 1310 or HISTORY 1200 or POL SCI 1200	American History since 1877 or Modern Western Civilization or American Government	3					
CHE 102	General Chemistry II	4	CHEM 1320	General Chemistry II	5					
CHE 201	Organic Chemistry I	5	CHEM 2210	Organic Chemistry I	3					
CHE 202	Organic Chemistry II	5	CHEM 2220	Organic Chemistry II (Will satisfy science elective requirement.)	3					
CPC 120 or MAT 161	C++ Programming Level I or Computer Programming and Application	3	CS 1971, 1981 or CS 1570	Intro to Programming Method and Lab (C++) or Intro to Programming (C++)	3					
	See your advisor for course options.			Humanities/Social Science Elective	3					
	See your advisor for course options.			Humanities/Social Science Elective	3					
	No free electives applied to the degree.			Maximum Free Electives	0					
	Group 2 Major Requirements	23		Group 2 Major Requirements	26					
	Group 1 Core Requirements	40		Group 1 Core Requirements	34					
	Total Hours	63		Total Hours* *S&T advisor permission is required to transfer more than 71 credits toward the S&T Chemical/Biochemical Engineering degree.	60					

	Civil Engineering Group 2 Major Requirements										
	<b>Lincoln Land Community College</b>	<u> </u>	Semester	<u>Missouri S&amp;T</u>							
EGL 102 or	Composition II or	3	ENGLISH 11	60 or Writing and Research or	2						
CMN 101	Fundamentals of Speech	3	SPMS 1185		3						
HIS 111 or	United States History to 1877 or		HISTORY 13	•							
HIS 112 or	United States History Since 1877 or	3	HISTORY 13	310 or American History since 1877 or	2						
HIS 102 or	History of Western Civilization or	3	HISTORY 12	200 or Modern Western Civilization or	ა						
POS 101	American Politics		POL SCI 120	OO American Government							
ENG 220	Applied Mechanics (Statics)	3	CIV ENG 22	00 Engineering Mechanics-Statics	3						
ENG 221	Dynamics	3	MECH ENG	2350 Engineering Mechanics-Dynamics	3						
ENG 240	Mechanics of Materials	4	CIV ENG 22	10 Mechanics of Materials	3						
	See your advisor for course options.			Humanities/Social Science Elective	3						
	No free electives applied to the degree.			Maximum Free Electives	0						
	Group 2 Major Requirements	16		Group 2 Major Requirements	18						
	Group 1 Core Requirements	40		Group 1 Core Requirements	34						
	Tot	al Hours 56		Tota *S&T advisor permission is required to transfer more than 69 cred	I Hours* 52						
				the S&T Civil Engineering degree.	its toward						

	Computer Engine	ering G	roup 2 Majo	or Requirements	
	Lincoln Land Community College	Semeste	er_	Missouri S&T	
CMN 101	Fundamentals of Speech	3	SPMS 1185	Public Speaking	3
EGL 102	Composition II	3	ENGLISH 1160	Writing and Research	3
HIS 111 or	United States History to 1877 or		HISTORY 1300 or	American History to 1877 or	
HIS 112 or	United States History Since 1877 or	3	HISTORY 1310 or	American History since 1877 or	2
HIS 102 or	History of Western Civilization or	3	HISTORY 1200 or	Modern Western Civilization or	3
POS 101	American Politics		POL SCI 1200	American Government	
MAT 161	Computer Programming and Application	4	CS 1570	Intro to Programming (C++)	4
			CIV ENG 2200 and	Engineering Mechanics-Statics and	
ENG 220 and	Applied Mechanics (Statics) and	3	MECH ENG 2350	Engineering Mechanics-Dynamics	6
ENG 221	Dynamics			(Both courses combined will satisfy a required engineering science elective.)	,
ENG 270	Circuit Analysis	3	EE 2100**	Circuits I **A passing grade on the Missouri S&T EE Advancement	
LING 270	Circuit Arialysis	3	LL 2100	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
	See your advisor for course options.			Humanities/Social Science Elective	3
	See your advisor for course options.			Maximum Free Electives	3
	Group 2 Major Requirements	22		Group 2 Major Requirements	31
	Group 1 Core Requirements	40		Group 1 Core Requirements	34
	Total Hours	62		Total Hours*	65
				*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									
	incoln Land Community College	Semester		Missouri S&T						
CMN 101	Fundamentals of Speech	3	SPMS 1185	Public Speaking	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 Application	4	CS 1570	Intro to Programming (C++)	4					
ENG 220 and ENG 221	Applied Mechanics (Statics) and Dynamics	3	CIV ENG 2200 and MECH ENG 2350	Engineering Mechanics-Statics and Engineering Mechanics-Dynamics (Both courses combined will satisfy a required engineering science	6					
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					
	See your advisor for course options.			Humanities/Social Science Elective	3					
	See your advisor for course options.			Maximum Free Electives	3					
	Group 2 Major Requirements	22		Group 2 Major Requirements	31					
	Group 1 Core Requirements	40		Group 1 Core Requirements	34					
	Total Hours	62		Total Hours* *S&T advisor permission is required to transfer more than 68 credits toward the S&T Electrical Engineering degree.	65					

	<b>Lincoln Land Community Colle</b>	ge	Semester		<u>Missouri S&amp;T</u>	
PSY 101	Intro to Psychology	3		PSYCH 1101	General Psychology	3
HIS 111 or	United States History to 1877 or			HISTORY 1300 or	American History to 1877 or	
HIS 112 or	United States History Since 1877 or	2		HISTORY 1310 or	American History since 1877 or	3
HIS 102 or	History of Western Civilization or	3		HISTORY 1200 or	Modern Western Civilization or	3
POS 101	American Politics			POL SCI 1200	American Government	
EGL 102 or	Composition II or	2		ENGLISH 1160 or	Writing and Research or	3
CMN 101	Fundamentals of Speech	3		SPMS 1185	Principles of Speech	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
	See your advisor for course options.				Humanities/Social Science Elective	3
	See your advisor for course options.				Maximum Free Electives	3
	Group 2 Major Requirements	25	-		Group 2 Major Requirements	30
	Group 1 Core Requirements	40			Group 1 Core Requirements	34
		Total Hours 65			Total Hours* *S&T advisor permission is required to transfer more than 68 credits toward the S&T Engineering Management degree.	64
				O		
	Environmental	Engine	ering	Group 2 N	lajor Requirements	
	Lincoln Land Community Colle		Semester	<u> </u>	Missouri S&T	
		ge_		<u> </u>	-	2
CMN 101	Lincoln Land Community Colle Composition II or Fundamentals of Speech			ENGLISH 1160 or SPMS 1185	Missouri S&T  Writing and Research or  Principles of Speech	3
CMN 101 HIS 111 or	Lincoln Land Community Colle Composition II or Fundamentals of Speech United States History to 1877 or	ge_		ENGLISH 1160 or SPMS 1185 HISTORY 1300 or	Missouri S&T Writing and Research or Principles of Speech American History to 1877 (preferred) or	3
CMN 101 HIS 111 or HIS 112 or	Lincoln Land Community Colle Composition II or Fundamentals of Speech United States History to 1877 or United States History Since 1877 or	ge_		ENGLISH 1160 or SPMS 1185 HISTORY 1300 or HISTORY 1310 or	Missouri S&T  Writing and Research or  Principles of Speech  American History to 1877 (preferred) or  American History since 1877 (preferred) or	3
CMN 101 HIS 111 or HIS 112 or HIS 102	Lincoln Land Community Colle Composition II or Fundamentals of Speech United States History to 1877 or	<b>ge</b> 3		ENGLISH 1160 or SPMS 1185 HISTORY 1300 or HISTORY 1310 or HISTORY 1200	Missouri S&T  Writing and Research or  Principles of Speech  American History to 1877 (preferred) or  American History since 1877 (preferred) or  Modern Western Civilization	
CMN 101 HIS 111 or HIS 112 or HIS 102 CHE 102	Lincoln Land Community Colle Composition II or Fundamentals of Speech United States History to 1877 or United States History Since 1877 or	<b>ge</b> 3		ENGLISH 1160 or SPMS 1185 HISTORY 1300 or HISTORY 1310 or HISTORY 1200 CHEM 1320	Missouri S&T  Writing and Research or  Principles of Speech American History to 1877 (preferred) or American History since 1877 (preferred) or Modern Western Civilization General Chemistry II	
CMN 101 HIS 111 or HIS 112 or HIS 102 CHE 102	Lincoln Land Community Colle Composition II or Fundamentals of Speech United States History to 1877 or United States History Since 1877 or History of Western Civilization	<b>ge</b> 3		ENGLISH 1160 or SPMS 1185 HISTORY 1300 or HISTORY 1310 or HISTORY 1200	Missouri S&T  Writing and Research or  Principles of Speech  American History to 1877 (preferred) or  American History since 1877 (preferred) or  Modern Western Civilization	3
EGL 102 or CMN 101 HIS 111 or HIS 112 or HIS 102 CHE 102 BIO 101 ENG 220	Lincoln Land Community Colle Composition II or Fundamentals of Speech United States History to 1877 or United States History Since 1877 or History of Western Civilization General Chemistry II	<b>ge</b> 3		ENGLISH 1160 or SPMS 1185 HISTORY 1300 or HISTORY 1310 or HISTORY 1200 CHEM 1320	Missouri S&T  Writing and Research or  Principles of Speech American History to 1877 (preferred) or American History since 1877 (preferred) or Modern Western Civilization General Chemistry II	3
CMN 101 HIS 111 or HIS 112 or HIS 102 CHE 102 BIO 101 ENG 220	Lincoln Land Community Colle Composition II or Fundamentals of Speech United States History to 1877 or United States History Since 1877 or History of Western Civilization General Chemistry II General Biology	<b>ge</b> 3 3 4 4 4		ENGLISH 1160 or SPMS 1185 HISTORY 1300 or HISTORY 1310 or HISTORY 1200 CHEM 1320 BIO SCI 1113	Missouri S&T  Writing and Research or Principles of Speech American History to 1877 (preferred) or American History since 1877 (preferred) or Modern Western Civilization General Chemistry II General Biology	3 4
CMN 101 HIS 111 or HIS 112 or HIS 102 CHE 102 BIO 101 ENG 220	Lincoln Land Community Colle  Composition II or Fundamentals of Speech United States History to 1877 or United States History Since 1877 or History of Western Civilization General Chemistry II General Biology Applied Mechanics (Statics)	ge 3 3 4 4 3		ENGLISH 1160 or SPMS 1185 HISTORY 1300 or HISTORY 1310 or HISTORY 1200 CHEM 1320 BIO SCI 1113 CIV ENG 2200 MECH ENG 2350	Missouri S&T  Writing and Research or Principles of Speech American History to 1877 (preferred) or American History since 1877 (preferred) or Modern Western Civilization General Chemistry II General Biology Engineering Mechanics-Statics Engineering Mechanics-Dynamics	3 3 4 3 3
CMN 101 HIS 111 or HIS 112 or HIS 102 CHE 102 BIO 101 ENG 220	Lincoln Land Community Colle  Composition II or Fundamentals of Speech United States History to 1877 or United States History Since 1877 or History of Western Civilization General Chemistry II General Biology Applied Mechanics (Statics) Dynamics Mechanics of Materials	ge 3 3 4 4 3 3 3		ENGLISH 1160 or SPMS 1185 HISTORY 1300 or HISTORY 1310 or HISTORY 1200 CHEM 1320 BIO SCI 1113 CIV ENG 2200	Missouri S&T  Writing and Research or Principles of Speech American History to 1877 (preferred) or American History since 1877 (preferred) or Modern Western Civilization General Chemistry II General Biology Engineering Mechanics-Statics	3 3 4 3 3 3
CMN 101 HIS 111 or HIS 112 or HIS 102 CHE 102 BIO 101 ENG 220	Lincoln Land Community Colle  Composition II or Fundamentals of Speech United States History to 1877 or United States History Since 1877 or History of Western Civilization General Chemistry II General Biology Applied Mechanics (Statics) Dynamics Mechanics of Materials See your advisor for course options.	ge 3 3 4 4 3 3 4 4		ENGLISH 1160 or SPMS 1185 HISTORY 1300 or HISTORY 1310 or HISTORY 1200 CHEM 1320 BIO SCI 1113 CIV ENG 2200 MECH ENG 2350	Missouri S&T  Writing and Research or Principles of Speech American History to 1877 (preferred) or American History since 1877 (preferred) or Modern Western Civilization General Chemistry II General Biology Engineering Mechanics-Statics Engineering Mechanics-Dynamics Mechanics of Materials Humanities/Social Science Elective	3 3 4 3 3 3
CMN 101 HIS 111 or HIS 112 or HIS 102 CHE 102 BIO 101 ENG 220	Lincoln Land Community Colle Composition II or Fundamentals of Speech United States History to 1877 or United States History Since 1877 or History of Western Civilization General Chemistry II General Biology Applied Mechanics (Statics) Dynamics Mechanics of Materials See your advisor for course options. No free electives applied to the degree.	ge 3 3 4 4 4 3 3 4		ENGLISH 1160 or SPMS 1185 HISTORY 1300 or HISTORY 1310 or HISTORY 1200 CHEM 1320 BIO SCI 1113 CIV ENG 2200 MECH ENG 2350	Missouri S&T  Writing and Research or Principles of Speech American History to 1877 (preferred) or American History since 1877 (preferred) or Modern Western Civilization General Chemistry II General Biology Engineering Mechanics-Statics Engineering Mechanics-Dynamics Mechanics of Materials Humanities/Social Science Elective Maximum Free Electives	3 3 4 3 3 3 3 0
CMN 101 HIS 111 or HIS 112 or HIS 102 CHE 102 BIO 101	Lincoln Land Community Colle  Composition II or Fundamentals of Speech United States History to 1877 or United States History Since 1877 or History of Western Civilization General Chemistry II General Biology Applied Mechanics (Statics) Dynamics Mechanics of Materials See your advisor for course options.	ge 3 3 4 4 3 3 4 4		ENGLISH 1160 or SPMS 1185 HISTORY 1300 or HISTORY 1310 or HISTORY 1200 CHEM 1320 BIO SCI 1113 CIV ENG 2200 MECH ENG 2350	Missouri S&T  Writing and Research or Principles of Speech American History to 1877 (preferred) or American History since 1877 (preferred) or Modern Western Civilization General Chemistry II General Biology Engineering Mechanics-Statics Engineering Mechanics-Dynamics Mechanics of Materials Humanities/Social Science Elective	3 3 4 3 3 3

	Geological Engine	ering G	roup 2 Maj	or Requirements	
	Lincoln Land Community College	Semester		<u>Missouri S&amp;T</u>	
EGL 102 or CMN 101	Composition II or Fundamentals of Speech	3	ENGLISH 1160 or SPMS 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 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 or any 3-hour course in chemistry, geochemistry, or biology	
	See your advisor for course options.			Humanities/Social Science Elective	3
	See your advisor for course options.			Humanities/Social Science Elective	3
	No free electives applied to the degree.			Maximum Free Electives	0
	Group 2 Major Requirements	20		Group 2 Major Requirements	21
	Group 1 Core Requirements	40		Group 1 Core Requirements	34
	Total Hours	60		Total Hours* *S&T advisor permission is required to transfer more than 68 credits toward the S&T Geological Engineering degree.	55

	Mechanical Engine	eeı	ring Group 2 Ma	jor 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 SPMS 1185	Writing and Research or Principles of Speech	3
CPC 120 or MAT 161	C++ Programming Level I or Computer Programming and Application	3	CS 1971, 1981 or CS 1570	Intro to Programming Method and Lab (C++) or Intro to Programming (C++)	3 3 4
ENG 270	Circuit Analysis	3	EE 2800	Circuit Analysis I	3
ENG 220 ENG 240	Applied Mechanics (Statics)  Mechanics of Materials	3	CIV ENG 2200 CIV ENG 2210	Engineering Mechanics-Statics Mechanics of Materials	3
MAT 215	Intro to Linear Algebra	3	MATH 3108	Linear Algebra I  (Will satisfy the Advanced Math/Comp Sci elective requirement.)	3
				Literature Elective	3
	See your advisor for course options.			Humanities/Social Science Elective	3
	No free electives applied to the degree.			Maximum Free Electives	0
	Group 2 Major Requirements	13	,	Group 2 Major Requirements	18
	Group 1 Core Requirements	40		Group 1 Core Requirements	34
	Total Hours	53		Total Hours* *S&T advisor permission is required to transfer more than 68 credits toward the S&T Mechanical Engineering degree.	52

Metallurgical Engineering Group 2 Major Requirements									
	<b>Lincoln Land Community Coll</b>	ege_	Semes	<u>ster</u>	Missouri S&T				
EGL 102 or CMN 101	Composition II or Fundamentals of Speech		3	ENGLISH 1160 or SPMS 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	<b>CIV ENG 2210</b>	Mechanics of Materials	3			
CHE 102	General Chemistry II		4	CHEM 1320	General Chemistry II	3			
CHE 201 or ENG 270	Organic Chemisrty I or Circuit Analysis		3	CHEM 2210 or EE 2800	Organic Chemistry I or Electrical Circuits Not specifically required for the degree but will satisfy Out-of-Department Technical Elective Requirement	3			
	See your advisor for course options.				Humanities/Social Science Elective	3			
	See your advisor for course options.				Humanities/Social Science Elective	3			
	See your advisor for course options.				Maximum Free Electives	5			
	Group 2 Major Requirements		20		Group 2 Major Requirements	29			
	Group 1 Core Requirements		40		Group 1 Core Requirements	34			
		Total Hours	60		Total Hours* *S&T advisor permission is required to transfer more than 68 credits toward the S&T Metallurgical Engineering degree.	63			

Mining 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		
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 Combiation of CIV ENG 22000 and 2210 and MECH ENG 2350 will be substituted for MI ENG 3812			
	See your advisor for course options.			Humanities/Social Science Elective	3		
	See your advisor for course options.			Humanities/Social Science Elective	3		
	No free electives applied to the degree.			Maximum Free Electives	0		
	Group 2 Major Requirements	16		Group 2 Major Requirements	21		
	Group 1 Core Requirements	40		Group 1 Core Requirements	34		
	Total Hours	56		Total Hours* *S&T advisor permission is required to transfer more than 68 credits toward the S&T Mining Engineering degree.	55		

Nuclear 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			
CPC 120 or	C++ Programming Level I or		00.40=4.4004		3			
MAT 161	Computer Programming and Application	3	CS 1971, 1981 or CS 1570	Intro to Programming Method and Lab (C++) or Intro to Programming (C++)	3 4			
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			
	See your advisor for course options.			Humanities/Social Science Elective	3			
	See your advisor for course options.			Humanities/Social Science Elective	3			
	See your advisor for course options.			Maximum Free Electives	6			
	Group 2 Major Requirements	16		Group 2 Major Requirements	24			
	Group 1 Core Requirements	40		Group 1 Core Requirements	34			
	Total Hours	56		Total Hours* *S&T advisor permission is required to transfer more than 68 credits toward the S&T Nuclear Engineering degree.	58			

Petroleum 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	United States History to 1877 or			HISTORY 1300 or	American History to 1877 or		
HIS 112 or	United States History Since 1877 or	3		HISTORY 1310 or	American History since 1877 or	3	
HIS 102 or	History of Western Civilization or	3		HISTORY 1200 or	Modern Western Civilization or	3	
POS 101	American Politics			POL SCI 1200	American Government		
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	
	See your advisor for course options.				Humanities/Social Science Elective	3	
	See your advisor for course options.				Humanities/Social Science Elective	3	
	No free electives applied to the degree.				Maximum Free Electives	0	
	Group 2 Major Requirements	13			Group 2 Major Requirements	18	
	Group 1 Core Requirements	40			Group 1 Core Requirements	34	
	Total Hours	5 53			Total Hours* *S&T advisor permission is required to transfer more than 68 credits toward the S&T Petroleum Engineering degree.	52	