

Lincoln Land Community College — Missouri S&T

General Engineering

Transfer Guide Effective as of Fall 2024

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>Lincoln Land Community College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
MAT 131	Calculus and Analytic Geometry I	5	MATH 1214	Calculus I	4
MAT 132	Calculus and Analytic Geometry II	5	MATH 1215	Calculus II	4
MAT 233	Calculus and Analytic Geometry III	4	MATH 2222	Calculus III	4
MAT 235	Differential Equations	4	MATH 3304	Elementary Differential Equations	3
PHY 201 and PHY 202	Physics I and Physics II <small>Both courses must be taken to receive full transfer credit.</small>	8	PHYSICS 1135 and PHYSICS 2135	Engineering Physics I and Engineering Physics II	8
CHE 101	General Chemistry I	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 Economics II (Macroeconomics)	3	ECON 1100 or ECON 1200	Principles of Microeconomics or Principles of Macroeconomics	3
Total Hours		36			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
Biomedical Engineering/Biomufacturing or Biomaterials
Ceramic Engineering
Chemical Engineering and 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 art, English and technical communication, etymology, foreign language, music, philosophy, speech and media studies, or theatre. Your campus may have additional acceptable options. Consult with your advisor or email transfer@mst.edu with questions. See Missouri S&T online catalog at <https://catalog.mst.edu/undergraduate/degreeprogramsandcourses/> for more information.

Aerospace Engineering Group 2 Major Requirements

<u>Lincoln Land Community College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
HIS 102 or HIS 111 or HIS 112 or POS 101	History of Western Civilization or United States History to 1877 or United States History Since 1877 or American Politics	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 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
ENG 270	Circuit Analysis	3	EE 2800	Electrical Circuits	3
ENG 220	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/Comp Sci elective requirement.</small>	3
	Literature Elective	3		Literature Elective	3
Ethics	Ethics Elective <small>Any engineering, business, bio, social ethics approved by advisor.</small>	3	Ethics	Ethics Elective <small>Any engineering, business, bio, social ethics approved by advisor.</small>	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	25		Group 2 Major Requirements	24
	Group 1 Core Requirements	36		Group 1 Core Requirements	34
	Total Hours	61		Total Hours*	58

*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>Lincoln Land Community College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
HIS 102* (or HIS 111 or HIS 112)	History of Western Civilization (or United States History to 1877 or United States History Since 1877) <small>*HIS 102 is preferred; 111 or 112 will also be accepted.</small>	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	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENG 221	Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	2
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
GEO 101	Physical Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
Humanities or Social Science or Communication	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language or one communication course from this list: EGL 102, CMN 101	3	Humanities or Social Science or Communication	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language or one communication course from this list: ENGLISH 1160, 1600, 3560 or SPMS 1185.	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	23		Group 2 Major Requirements	20
	Group 1 Core Requirements	36		Group 1 Core Requirements	34
	Total Hours	59		Total Hours*	54

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

Biomedical Engineering-Biomanufacturing Group 2 Major Requirements

<u>Lincoln Land Community College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
CMN 101	Fundamentals of Speech	3	SP&MS 1185	Principles of Speech	3
HIS 102 or HIS 111 or HIS 112 or POS 101	History of Western Civilization or United States History to 1877 or United States History Since 1877 or American Politics	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
CHE 102	General Chemistry II	4	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) <small>*CHEM 1510 is not an S&T degree requirement. Will transfer as general credit.</small>	3
CHE 201	Organic Chemistry I	5	CHEM 2210, 2219	Organic Chemistry I and Lab	4
CHE 202 or BIO 101 or BIO 111	Organic Chemistry II (5) or General Biology (4) or Principles of Biology I (4)	4	CHEM 2220, 2229 or BIO SCI 1113, 1219 or BIO SCI 2223	Organic Chemistry II and Lab or General Biology and Lab or General Genetics <small>Applies to degree as Track Elective.</small>	4
MAT 161	Computer Programming and Applications for Engineers	4	CS 1500	Computational Problem Solving	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	26		Group 2 Major Requirements	23
	Group 1 Core Requirements	36		Group 1 Core Requirements	34
	Total Hours	62		Total Hours*	57

*S&T advisor permission is required to transfer more than 68 credit hours toward the degree.

Biomedical Engineering-Biomaterials Group 2 Major Requirements

<u>Lincoln Land Community College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
CMN 101	Fundamentals of Speech	3	SP&MS 1185	Principles of Speech	3
HIS 102 or HIS 111 or HIS 112 or POS 101	History of Western Civilization or United States History to 1877 or United States History Since 1877 or American Politics	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
CHE 102	General Chemistry II	4	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) <small>*CHEM 1510 is not an S&T degree requirement. Will transfer as general credit.</small>	3
CHE 201	Organic Chemistry I	5	CHEM 2210, 2219*	Organic Chemistry I and Lab* <small>*CHEM 2219 Lab applies to the degree as a Track Elective (non-engineering).</small>	4
CHE 202	Organic Chemistry II	5	CHEM 2220, 2229*	Organic Chemistry II and Lab* <small>CHEM 2229 Lab applies to the degree as a Track Elective (non-engineering).</small>	4
BIO 101 or BIO 111	General Biology (4) or Principles of Biology I (4)	4	BIO SCI 1113*, 1219*	General General Biology* and Lab* <small>*Applies to degree as Track Elective (Non-engineering).</small>	4
MAT 161	Computer Programming and Applications for Engineers	4	CS 1500	Computational Problem Solving	3
ENG 220	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	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. Applies to the degree as a Track Elective (Engineering).	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	34		Group 2 Major Requirements	30
	Group 1 Core Requirements	36		Group 1 Core Requirements	34
	Total Hours	70		Total Hours*	64

*S&T advisor permission is required to transfer more than 65 credits toward the S&T Biomedical Engineering degree.

Ceramic Engineering Group 2 Major Requirements

<u>Lincoln Land Community College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
HIS 102 or HIS 111 or HIS 112 or POS 101	History of Western Civilization or United States History to 1877 or United States History Since 1877 or American Politics	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 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	Organic Chemistry I <small>Will satisfy the advanced chemistry elective requirement.</small>	3
CHE 102	General Chemistry II	4	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) <small>*CHEM 1510 is not an S&T degree requirement. Will transfer as general credit.</small>	3
EGL 102 or CMN 101 or HSS Elective	Composition II or Fundamentals of Speech or Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	ENGLISH 1160 or SPMS 1185 or HSS Elective	Writing and Research or Principles of Speech or Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	28		Group 2 Major Requirements	24
	Group 1 Core Requirements	36		Group 1 Core Requirements	34
	Total Hours	64		Total Hours*	58

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

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

<u>Lincoln Land Community College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
CMN 101	Fundamentals of Speech	3	SP&MS 1185	Principles of Speech	3
HIS 102 or HIS 111 or HIS 112 or POS 101	History of Western Civilization or United States History to 1877 or United States History Since 1877 or American Politics	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
CHE 102	General Chemistry II	4	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) <small>*CHEM 1510 is not an S&T degree requirement. Will transfer as general credit.</small>	3
CHE 201	Organic Chemistry I	5	CHEM 2210, 2219*	Organic Chemistry I and Lab* <small>*The lab will apply to the degree as 1 of 9 required science elective credits (below).</small>	4
CHE 202	Organic Chemistry II	5	CHEM 2220	Organic Chemistry II (3) CHEM 2220 will apply to the degree as 3 of 9 required science elective credits. CHEM 2229 is not an S&T degree requirement, will transfer as general elective credit.	8
MAT 161	Computer Programming and Applications for Engineers	4	CS 1500	Computational Problem Solving	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	27		Group 2 Major Requirements	27
	Group 1 Core Requirements	36		Group 1 Core Requirements	34
	Total Hours	63		Total Hours*	61

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

Civil Engineering Group 2 Major Requirements

<u>Lincoln Land Community College</u>		<u>Semester</u>	<u>Missouri S&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 102 or HIS 111 or HIS 112 or POS 101	History of Western Civilization or United States History to 1877 or United States History Since 1877 or American Politics	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
GEO 101	Physical Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
ENG 220	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENG 221	Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	2
ENG 240	Mechanics of Materials	4	CIV ENG 2210	Mechanics of Materials	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	23		Group 2 Major Requirements	20
	Group 1 Core Requirements	36		Group 1 Core Requirements	34
	Total Hours	59		Total Hours*	54

*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>Lincoln Land Community College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
CMN 101	Fundamentals of Speech	3	SPMS 1185	Principles of Speech	3
EGL 102	Composition II	3	ENGLISH 1160	Writing and Research	3
HIS 102 or HIS 111 or HIS 112 or POS 101	History of Western Civilization or United States History to 1877 or United States History Since 1877 or American Politics	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
MAT 220	Discrete Structures	3	CS 1200	Discrete Math for Computer Science	3
ENG 220 or ENG 221 or CHE 201	Statics or Dynamics or Organic Chemistry I (5)	3	CIV ENG 2200 or MECH ENG 2350 or CHEM 2210, 2219*	Engineering Mechanics-Statics (3) or Engineering Mechanics-Dynamics (2) or Organic Chemistry I (3) and Lab* (1) <small>Satisfies a required engineering/science elective. *CHEM 2219 is not an S&T degree requirement, will transfer as general elective credit.</small>	3
ENG 270	Circuit Analysis	3	EE 2100**	Circuits I <small>**A passing grade on the Missouri S&T EE Advancement Exam I is required to receive credit for EE 2100.</small>	3
MAT 215	Intro to Linear Algebra	3	MATH 3108	Linear Algebra <small>Will satisfy a required math elective.</small>	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3
Electives	Maximum Free Electives	3	Electives	Maximum Free Electives	3
	Group 2 Major Requirements	27		Group 2 Major Requirements	27
	Group 1 Core Requirements	36		Group 1 Core Requirements	34
	Total Hours	63		Total Hours*	61

*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>Lincoln Land Community College</u>		<u>Semester</u>	<u>Missouri S&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 102 or HIS 111 or HIS 112 or POS 101	History of Western Civilization or United States History to 1877 or United States History Since 1877 or American Politics	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
MAT 161	Computer Programming and Applications for Engineers	4	CS 1500	Computational Problem Solving	3
ENG 220 and ENG 221	Applied Mechanics (Statics) (3) and Dynamics (3))	5	CIV ENG 2200 and MECH ENG 2350	Engineering Mechanics-Statics (3) and Engineering Mechanics-Dynamics (2)	3
BOTH of the courses above or ONE of the courses below. OR CHE 201	Both courses above combined or any one of the following courses will satisfy a required engineering science elective. OR Organic Chemistry I (5)	5	BOTH of the courses above or ONE of the courses below. OR CHEM 2210, 2219	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 <small>**A passing grade on the Missouri S&T EE Advancement Exam I is required to receive credit for EE 2100.</small>	3
MAT 215	Intro to Linear Algebra	3	MATH 3108	Linear Algebra	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3
Electives	Maximum Free Electives	3	Electives	Maximum Free Electives	3
	Group 2 Major Requirements	30		Group 2 Major Requirements	27
	Group 1 Core Requirements	36		Group 1 Core Requirements	34
	Total Hours	66		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&T</u>		
PSY 101	Intro to Psychology	3	PSYCH 1101	General Psychology	3
HIS 102 or HIS 111 or HIS 112 or POS 101	History of Western Civilization or United States History to 1877 or United States History Since 1877 or American Politics	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
EGL 102	Composition II	3	SPMS 1185	Principles of Speech	3
ENG 270	Circuit Analysis	3	ENGLISH 1160	Writing and Research	3
ENG 220	Statics	3	EE 2800	Electrical Circuits	3
ENG 221	Dynamics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENG 240	Mechanics of Materials	4	MECH ENG 2350	Engineering Mechanics-Dynamics	2
			CIV ENG 2210	Mechanics of Materials	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3
	<i>No free electives applied to the degree.</i>	3	Electives	Maximum Free Electives	0
	Group 2 Major Requirements	28		Group 2 Major Requirements	26
	Group 1 Core Requirements	36		Group 1 Core Requirements	34
	Total Hours	64		Total Hours*	61

*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&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 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	3
GEO 101	Physical Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
CHE 102	General Chemistry II	4	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) <small>*CHEM 1510 is not an S&T degree requirement. Will transfer as general credit.</small>	3
BIO 101	General Biology	4	BIO SCI 1113, 1219*	General Biology <small>*BIO SCI 1219 is not an S&T degree requirement. Will transfer as general elective credit.</small>	3
ENG 220	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENG 221	Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	2
ENG 240	Mechanics of Materials	4	CIV ENG 2210	Mechanics of Materials	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	31		Group 2 Major Requirements	26
	Group 1 Core Requirements	36		Group 1 Core Requirements	34
	Total Hours	67		Total Hours*	60

*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

<u>Lincoln Land Community College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
HIS 102 or HIS 111 or HIS 112 or POS 101	History of Western Civilization or United States History to 1877 or United States History Since 1877 or American Politics	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
MAT 161	Computer Programming and Applications for Engineers	4	CS 1500	Computational Problem Solving	3
GEO 101	Physical Geology	4	GEO ENG 1150 (GEOLOGY 1110)	Physical and Environmental Geology	3
ENG 220	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENG 221	Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	2
ENG 240	Mechanics of Materials	4	CIV ENG 2210	Mechanics of Materials	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	27		Group 2 Major Requirements	23
	Group 1 Core Requirements	36		Group 1 Core Requirements	34
	Total Hours	63		Total Hours*	57

*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>Lincoln Land Community College</u>		<u>Semester</u>	<u>Missouri S&T</u>	
HIS 102 or HIS 111 or HIS 112 or POS 101	History of Western Civilization or United States History to 1877 or United States History Since 1877 or American Politics	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government
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
ENG 270	Circuit Analysis	3	EE 2800	Electrical Circuits
ENG 220	Statics	3	CIV ENG 2200 CIV ENG 2210	Engineering Mechanics-Statics Mechanics of Materials
MAT 215	Intro to Linear Algebra	3	MATH 3108	Linear Algebra I <small>Will satisfy the Advanced Math/Statistics elective requirement.</small>
	Literature Elective	3		Literature Elective
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives
	Group 2 Major Requirements	21		Group 2 Major Requirements
	Group 1 Core Requirements	36		Group 1 Core Requirements
	Total Hours	57		Total Hours*
				58

*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>Lincoln Land Community College</u>		<u>Semester</u>	<u>Missouri S&T</u>	
HIS 102 or HIS 111 or HIS 112 or POS 101	History of Western Civilization or United States History to 1877 or United States History Since 1877 or American Politics	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government
ENG 220	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics
ENG 240	Mechanics of Materials	4	CIV ENG 2210	Mechanics of Materials
CHE 102	General Chemistry II	4	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) <small>*CHEM 1510 is not an S&T degree requirement. Will transfer as general credit.</small>
CHE 201 or ENG 270	Organic Chemistry I or Circuit Analysis	3	CHEM 2210, 2219 or EE 2800	Organic Chemistry I (3) and Lab (1) or Electrical Circuits (3) <small>Not specifically required for the degree but will satisfy out-of-department technical elective requirement</small>
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.
Electives	Maximum Free Electives	5	Electives	Maximum Free Electives
	Group 2 Major Requirements	28		Group 2 Major Requirements
	Group 1 Core Requirements	36		Group 1 Core Requirements
	Total Hours	64		Total Hours*
				58

*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>Lincoln Land Community College</u>	<u>Semester</u>	<u>Missouri S&T</u>	
EGL 102	Composition II	ENGLISH 1160	Writing and Research
HIS 102 or HIS 111 or HIS 112 or POS 101	History of Western Civilization or United States History to 1877 or United States History Since 1877 or American Politics	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government
ENG 220	Statics	CIV ENG 2200	Engineering Mechanics-Statics
ENG 221	Dynamics	MECH ENG 2350	Engineering Mechanics-Dynamics
ENG 240	Mechanics of Materials	CIV ENG 2210	Mechanics of Materials
GEO 101	Physical Geology	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.
	<i>No free electives applied to the degree.</i>		Maximum Free Electives
	Group 2 Major Requirements		Group 2 Major Requirements
	Group 1 Core Requirements		Group 1 Core Requirements
Total Hours	62	Total Hours*	57

*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>Lincoln Land Community College</u>	<u>Semester</u>	<u>Missouri S&T</u>	
EGL 102 or CMN 101	Composition II or Fundamentals of Speech	ENGLISH 1160 or SP&MS 1185	Writing and Research or Principles of Speech
HIS 102 or HIS 111 or HIS 112 or POS 101	History of Western Civilization or United States History to 1877 or United States History Since 1877 or American Politics	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government
MAT 215	Intro to Linear Algebra	MATH 3108	Linear Algebra
ENG 220	Statics	CIV ENG 2200	Engineering Mechanics-Statics
ENG 240	Mechanics of Materials	CIV ENG 2210	Mechanics of Materials
ENG 270	Circuit Analysis	EE 2800	Electrical Circuits
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.
Electives	Maximum Free Electives	Electives	Maximum Free Electives
	Group 2 Major Requirements		Group 2 Major Requirements
	Group 1 Core Requirements		Group 1 Core Requirements
Total Hours	67	Total Hours*	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>Lincoln Land Community College</u>	<u>Semester</u>	<u>Missouri S&T</u>	
EGL 102	Composition II	ENGLISH 1160	Writing and Research
HIS 102 or HIS 111 or HIS 112 or POS 101	History of Western Civilization or United States History to 1877 or United States History Since 1877 or American Politics	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government
GEO 101	Physical Geology	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology
ENG 220	Statics	CIV ENG 2200	Engineering Mechanics-Statics
ENG 221	Dynamics	MECH ENG 2350	Engineering Mechanics-Dynamics
		CIV ENG 2210	Mechanics of Materials
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.
	<i>No free electives applied to the degree.</i>		Maximum Free Electives
	Group 2 Major Requirements		Group 2 Major Requirements
	Group 1 Core Requirements		Group 1 Core Requirements
Total Hours	58	Total Hours*	57

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