Rend Lake College — Missouri S&T

General Engineering

Transfer Guide Effective as of Fall 2026

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

Students are not required to complete all courses on this guide before transferring to Missouri S&T.

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.

Rend Lake College			Semester	Missouri S&T		
MATH 1121	Calculus and Analytic Geometry I	5		MATH 1214	Calculus I Grade of C or better is required.	4
MATH 2122	Calculus and Analytic Geometry II	5		MATH 1215	Calculus II Grade of C or better is required.	4
MATH 2123	Calculus and Analytic Geometry III	4		MATH 2222	Calculus III Grade of C or better is required.	4
MATH 2130	Differential Equations	3		MATH 3304	Elementary Differential Equations	3
PHY 1103	University Physics I	5		PHYSICS 1135	Engineering Physics I Grade of C or better is required.	4
PHY 1104	University Physics II	5		PHYSICS 2135	Engineering Physics II Grade of C or better is required.	4
ENGL 1101	Rhetoric and Composition	3		ENGLISH 1120	Exposition and Argumentation	3
	Total Hours	30			Total Hours	26

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 - Biomanufacturing
Biomedical Engineering - 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
Semiconductor 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.

This transfer guide is published by Missouri University of Science and Technology and is in effect as of Fall 2026.
Further information or updates are available from Missouri S&T Transfer Admissions at transfer.mst.edu, transfer@mst.edu, or 800-522-0938.

Aerospace Engineering Group 2 Major Requirements

Rend Lake College			Semester	Missouri S&T		
ENGL 1102 or COMM 1101	Rhetoric and Composition II or Principles of Effective Public Speaking	3		ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHE 1103	Inorganic Chemistry	5		CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
PHY 2121	Electrical Engineering Circuits	4		ELEC ENG 2800	Electrical Circuits	3
PHY 2101	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
MATH 2108	Linear Algebra	3		MATH 3108	Linear Algebra I Satisfies the Advanced Math/Comp Sci elective requirement.	3
Ethics	Ethics Elective Engineering, business, bio, social or other ethics approved by advisor.	3		Ethics	Ethics Elective Engineering, business, bio, social or other ethics approved by advisor.	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**						
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.						
ENGL 2109 or ENGL 2110 or ENGL 2111 or ENGL 2112 or **HIST 2101*** or **HIST 2102*** or ART 1101 or MUSI 1100 or THEA 1106	British Literature-Beowulf to 1799 or British Literature-1800 to Present or American Literature to 1865 or American Literature, 1865 to Present or **American History I*** or **American History II*** or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or **HISTORY 1300*** or **HISTORY 1310*** or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1600 to 1865 or American Literature: 1865 to Present or **American History to 1877*** or **American History Since 1877*** or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. ***Satisfies the State of Missouri government requirement.**	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.						
HIST 1101 or **HIST 1102*** or GEOG 1101 or PHIL 1101 or PHIL 2101 or **POLI 2101*** or PSYC 2101 or ECON 2102 or ECON 2101 or Foreign Language	Western Civilization I or **Western Civilization II*** or Intro to Geography or Intro to Philosophy or Logic or **American Government*** or Intro to Psychology or Principles of Economics II or Principles of Economics I or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6		HISTORY 1100 or **HISTORY 1200*** or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or **Modern Western Civilization*** or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or **American Government*** or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6
Humanities, Arts, and Social Sciences Select 3 hours.						
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3		HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	No free electives applied to the degree.	0			Maximum Free Electives	0
	Group 2 Major Requirements	36			Group 2 Major Requirements	35
	Group 1 Core Requirements	30			Group 1 Core Requirements	26
	Total Hours	66			Total Hours*	61
					*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

Rend Lake College			Semester	Missouri S&T		
ENGL 1102 or COMM 1101	Rhetoric and Composition II or Principles of Effective Public Speaking	3		ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHE 1103	Inorganic Chemistry	5		CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
PHY 2101	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
PHY 2102	Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 12 hours to include 3 hours Humanities and Fine Arts and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**						
Humanities and Fine Arts Select 3 hours.						
ENGL 2109 or ENGL 2110 or ENGL 2111 or ENGL 2112 or **HIST 2101*** or **HIST 2102*** or MUSI 1100 or THEA 1106 or Literature	British Literature-Beowulf to 1799 or British Literature-1800 to Present or American Literature to 1865 or American Literature, 1865 to Present or **American History I*** or **American History II*** or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	3		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or **HISTORY 1300*** or **HISTORY 1310*** or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or **American History to 1877*** or **American History Since 1877*** or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. ***Satisfies the State of Missouri government requirement.**	3
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines, to include HISTORY 1200.						
HIST 1102*	**Western Civilization II*** ***Satisfies the State of Missouri Government requirement.**	3		**HISTORY 1200***	**Modern Western Civilization*** ***Satisfies the State of Missouri Government requirement.**	3
PHIL 1101 or PHIL 2101 or **POLI 2101*** or PSYC 2101 or ECON 2102 or ECON 2101 or Foreign Language	Intro to Philosophy or Logic or **American Government*** or Intro to Psychology or Principles of Economics II or Principles of Economics I or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	3		PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or **American Government*** or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	3
Humanities, Arts, and Social Sciences Select 3 hours.						
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3		HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	No free electives applied to the degree.	0			Maximum Free Electives	0
	Group 2 Major Requirements	26			Group 2 Major Requirements	25
	Group 1 Core Requirements	30			Group 1 Core Requirements	26
	Total Hours	56			Total Hours*	51
					*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

Rend Lake College		Semester	Missouri S&T		Semester
COM 1101	Principles of Effective Public Speaking	3	SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHE 1103	Inorganic Chemistry	5	CHEM 1310, 1319	General Chemistry I and Lab	5
CHE 1104	Qualitative Analysis and Inorganic Chemistry	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
CHE 2120	Organic Chemistry I	5	CHEM 2210, 2219	Organic Chemistry I and Lab	4
CHE 2121 or BIO 1101	Organic Chemistry II or College Biology	5	CHEM 2220, 2229 or BIO SCI 1113, 1219	Organic Chemistry II and Lab or General Biology and Lab Applies to degree as Track Elective.	4
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 9 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 3 hours Behavioral and Social Sciences. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**					
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.					
ENGL 2109 or ENGL 2110 or ENGL 2111 or ENGL 2112 or **HIST 2101*** or **HIST 2102*** or ART 1101 or MUSI 1100 or THEA 1106	British Literature-Beowulf to 1799 or British Literature-1800 to Present or American Literature to 1865 or American Literature, 1865 to Present or **American History I*** or **American History II*** or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or **HISTORY 1300*** or **HISTORY 1310*** or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1600 to 1865 or American Literature: 1865 to Present or **American History to 1877*** or **American History Since 1877*** or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. ***Satisfies the State of Missouri government requirement.**	6
Behavioral and Social Sciences Select 3 hours.					
HIST 1101 or **HIST 1102*** or GEOG 1101 or **POLI 2101*** or PSYC 2101 or ECON 2102 or ECON 2101 or Foreign Language	Western Civilization I or **Western Civilization II*** or Intro to Geography or **American Government*** or Intro to Psychology or Principles of Economics II or Principles of Economics I or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	3	HISTORY 1100 or **HISTORY 1200*** or HISTORY 2110 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or **Modern Western Civilization*** or World Regional Geography or **American Government*** or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	3
	No free electives applied to the degree.	0		Maximum Free Electives	0
	Group 2 Major Requirements	32		Group 2 Major Requirements	28
	Group 1 Core Requirements	30		Group 1 Core Requirements	26
	Total Hours	62		Total Hours*	54

*S&T advisor permission is required to transfer more than 69 credit hours toward the degree.

Biomedical Engineering-Biomaterials
Group 2 Major Requirements

Rend Lake College			Semester	Missouri S&T		
COM 1101	Principles of Effective Public Speaking	3		SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHE 1103	Inorganic Chemistry	5		CHEM 1310, 1319	General Chemistry I and Lab	5
CHE 1104	Qualitative Analysis and Inorganic Chemistry	5		CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
CHE 2120	Organic Chemistry I	5		CHEM 2210, 2219*	Organic Chemistry I and Lab* *CHEM 2219 Lab applies to the degree as a Track Elective (non-engineering).	4
CHE 2121	Organic Chemistry II	5		CHEM 2220, 2229*	Organic Chemistry II and Lab* CHEM 2229 Lab applies to the degree as a Track Elective (non-engineering).	4
BIO 1101	College Biology	5		BIO SCI 1113*, 1219*	General Biology* and Lab* *Applies to degree as Track Elective (Non-engineering).	4
PHY 2101	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
PHY 2121	Electrical Engineering Circuits	4		ELEC ENG 2100*, 2101	Circuits I* (3) and Circuit Analysis Lab (1) *A passing grade on the Missouri S&T ELEC ENG 2100 final exam is required to receive credit for ELEC ENG 2100. Without the required passing score the lecture will transfer as ELEC ENG 2800. ELEC ENG 2100 applies to the degree as a Track Elective (Engineering).	4
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 9 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 3 hours Behavioral and Social Sciences. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**						
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.						
ENGL 2109 or ENGL 2110 or ENGL 2111 or ENGL 2112 or **HIST 2101*** or **HIST 2102*** or ART 1101 or MUSI 1100 or THEA 1106	British Literature-Beowulf to 1799 or British Literature-1800 to Present or American Literature to 1865 or American Literature, 1865 to Present or **American History I*** or **American History II*** or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or **HISTORY 1300*** or **HISTORY 1310*** or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1600 to 1865 or American Literature: 1865 to Present or **American History to 1877*** or **American History Since 1877*** or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. ***Satisfies the State of Missouri government requirement.**	6
Behavioral and Social Sciences Select 3 hours.						
HIST 1101 or **HIST 1102*** or GEOG 1101 or **POLI 2101*** or PSYC 2101 or ECON 2102 or ECON 2101 or Foreign Language	Western Civilization I or **Western Civilization II*** or Intro to Geography or **American Government*** or Intro to Psychology or Principles of Economics II or Principles of Economics I or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	3		HISTORY 1100 or **HISTORY 1200*** or HISTORY 2110 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or **Modern Western Civilization*** or World Regional Geography or **American Government*** or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	3
No free electives applied to the degree.		0		Maximum Free Electives		0
Group 2 Major Requirements		44		Group 2 Major Requirements		39
Group 1 Core Requirements		30		Group 1 Core Requirements		26
	Total Hours	74			Total Hours*	65
				*S&T advisor permission is required to transfer more than 69 credits toward the S&T Biomedical Engineering degree.		

Ceramic Engineering Group 2 Major Requirements

Rend Lake College		Semester	Missouri S&T		
ENGL 1102 or COMM 1101	Rhetoric and Composition II or Principles of Effective Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
PHY 2101	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
CHE 1103	Inorganic Chemistry	5	CHEM 1310, 1319	General Chemistry I and Lab	5
CHE 1104	Qualitative Analysis and Inorganic Chemistry	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**					
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.					
ENGL 2109 or ENGL 2110 or ENGL 2111 or ENGL 2112 or **HIST 2101*** or **HIST 2102*** or ART 1101 or MUSI 1100 or THEA 1106	British Literature-Beowulf to 1799 or British Literature-1800 to Present or American Literature to 1865 or American Literature, 1865 to Present or **American History I*** or **American History II*** or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or **HISTORY 1300*** or **HISTORY 1310*** or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1600 to 1865 or American Literature: 1865 to Present or **American History to 1877*** or **American History Since 1877*** or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. ***Satisfies the State of Missouri government requirement.**	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.					
HIST 1101 or **HIST 1102*** or GEOG 1101 or PHIL 1101 or PHIL 2101 or **POLI 2101*** or PSYC 2101 or ECON 2102 or ECON 2101 or Foreign Language	Western Civilization I or **Western Civilization II*** or Intro to Geography or Intro to Philosophy or Logic or **American Government*** or Intro to Psychology or Principles of Economics II or Principles of Economics I or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6	HISTORY 1100 or **HISTORY 1200*** or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or **Modern Western Civilization*** or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or **American Government*** or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6
Humanities, Arts, and Social Sciences Select 3 hours.					
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3	HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	No free electives applied to the degree.	0		Maximum Free Electives	0
	Group 2 Major Requirements	31		Group 2 Major Requirements	29
	Group 1 Core Requirements	30		Group 1 Core Requirements	26
	Total Hours	61		Total Hours*	55
				*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

Rend Lake College		Semester	Missouri S&T		
COM 1101	Principles of Effective Public Speaking	3	SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHE 1103	Inorganic Chemistry	5	CHEM 1310, 1319	General Chemistry I and Lab	5
CHE 1104	Qualitative Analysis and Inorganic Chemistry	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis* (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
CHE 2120	Organic Chemistry I	5	CHEM 2210, 2219*	Organic Chemistry I and Lab* *CHEM 2210 is a degree requirement. CHEM 2219 applies to the degree as 1 of 9 required science elective credits See note below .	4
CHE 2121	Organic Chemistry II	5	CHEM 2220, 2229*	Organic Chemistry II (3) and Lab* (1) CHEM 2220 will partially satisfy 3 of 9 required science elective credits. *CHEM 2229 is not an S&T degree requirement, will transfer as general elective credit.	8
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**					
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.					
ENGL 2109 or ENGL 2110 or ENGL 2111 or ENGL 2112 or **HIST 2101*** or **HIST 2102*** or ART 1101 or MUSI 1100 or THEA 1106	British Literature-Beowulf to 1799 or British Literature-1800 to Present or American Literature to 1865 or American Literature, 1865 to Present or **American History I*** or **American History II*** or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or **HISTORY 1300*** or **HISTORY 1310*** or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1600 to 1865 or American Literature: 1865 to Present or **American History to 1877*** or **American History Since 1877*** or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. ***Satisfies the State of Missouri government requirement.**	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.					
HIST 1101 or **HIST 1102*** or GEOG 1101 or PHIL 1101 or PHIL 2101 or **POLI 2101*** or PSYC 2101 or ECON 2102 or ECON 2101 or Foreign Language	Western Civilization I or **Western Civilization II*** or Intro to Geography or Intro to Philosophy or Logic or **American Government*** or Intro to Psychology or Principles of Economics II or Principles of Economics I or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6	HISTORY 1100 or **HISTORY 1200*** or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or **Modern Western Civilization*** or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or **American Government*** or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6
	No free electives applied to the degree.	0		Maximum Free Electives	0
	Group 2 Major Requirements	35		Group 2 Major Requirements	35
	Group 1 Core Requirements	30		Group 1 Core Requirements	26
	Total Hours	65		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

Rend Lake College			Semester	Missouri S&T		
ENGL 1102 or COMM 1101	Rhetoric and Composition II or Principles of Effective Public Speaking	3		ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHE 1103	Inorganic Chemistry	5		CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
PHY 2101	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
PHY 2102	Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**						
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.						
ENGL 2109 or ENGL 2110 or ENGL 2111 or ENGL 2112 or **HIST 2101*** or **HIST 2102*** or ART 1101 or MUSI 1100 or THEA 1106	British Literature-Beowulf to 1799 or British Literature-1800 to Present or American Literature to 1865 or American Literature, 1865 to Present or **American History I*** or **American History II*** or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or **HISTORY 1300*** or **HISTORY 1310*** or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1600 to 1865 or American Literature: 1865 to Present or **American History to 1877*** or **American History Since 1877*** or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. ***Satisfies the State of Missouri government requirement.**	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.						
HIST 1101 or **HIST 1102*** or GEOG 1101 or PHIL 1101 or PHIL 2101 or **POLI 2101*** or PSYC 2101 or ECON 2102 or ECON 2101 or Foreign Language	Western Civilization I or **Western Civilization II*** or Intro to Geography or Intro to Philosophy or Logic or **American Government*** or Intro to Psychology or Principles of Economics II or Principles of Economics I or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6		HISTORY 1100 or **HISTORY 1200*** or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or **Modern Western Civilization*** or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or **American Government*** or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6
Humanities, Arts, and Social Sciences Select 3 hours.						
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3		HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	No free electives applied to the degree.	0			Maximum Free Electives	0
	Group 2 Major Requirements	29			Group 2 Major Requirements	28
	Group 1 Core Requirements	30			Group 1 Core Requirements	26
	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

Rend Lake College		Semester	Missouri S&T		
COM 1101	Principles of Effective Public Speaking	3	SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHE 1103	Inorganic Chemistry	5	CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
PHY 2101 and PHY 2102 BOTH of the courses above or ONE of the courses below. OR CHEM 2120	Statics and Dynamics Both courses above combined or any one of the following courses will satisfy a required engineering science elective. OR Organic Chemistry I	3	CIV ENG 2200 and MECH ENG 2350 BOTH of the courses above or ONE of the courses below. OR CHEM 2210	Engineering Mechanics-Statics (3) and Engineering Mechanics-Dynamics (2) Both courses above combined or any one of the following courses will satisfy a required engineering science elective. OR Organic Chemistry I (3)	3
PHY 2121	Electrical Engineering Circuits	4	ELEC ENG 2100*, 2101	Circuits I* (3) and Circuit Analysis Lab (1) *A passing grade on the Missouri S&T ELEC ENG 2100 final exam is required to receive credit for ELEC ENG 2100. Without the required passing score the lecture will transfer as ELEC ENG 2800.	4
MATH 2108	Linear Algebra	3	MATH 3108	Linear Algebra	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**					
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.					
ENGL 2109 or ENGL 2110 or ENGL 2111 or ENGL 2112 or **HIST 2101*** or **HIST 2102*** or ART 1101 or MUSI 1100 or THEA 1106	British Literature-Beowulf to 1799 or British Literature-1800 to Present or American Literature to 1865 or American Literature, 1865 to Present or **American History I*** or **American History II*** or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or **HISTORY 1300*** or **HISTORY 1310*** or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1600 to 1865 or American Literature: 1865 to Present or **American History to 1877*** or **American History Since 1877*** or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. ***Satisfies the State of Missouri government requirement.**	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.					
HIST 1101 or **HIST 1102*** or GEOG 1101 or PHIL 1101 or PHIL 2101 or **POLI 2101*** or PSYC 2101 or ECON 2102 or ECON 2101 or Foreign Language	Western Civilization I or **Western Civilization II*** or Intro to Geography or Intro to Philosophy or Logic or **American Government*** or Intro to Psychology or Principles of Economics II or Principles of Economics I or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6	HISTORY 1100 or **HISTORY 1200*** or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or **Modern Western Civilization*** or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or **American Government*** or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6
Humanities, Arts, and Social Sciences Select 3 hours.					
ENGL 1102	Rhetoric and Composition II	3	ENGLISH 1160	Writing and Research	3
Electives	Maximum Free Electives	3	Electives	Maximum Free Electives	3
	Group 2 Major Requirements	36		Group 2 Major Requirements	36
	Group 1 Core Requirements	30		Group 1 Core Requirements	26
	Total Hours	66		Total Hours*	62
				*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

Rend Lake College		Semester	Missouri S&T		
COM 1101	Principles of Effective Public Speaking	3	SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHE 1103	Inorganic Chemistry	5	CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
PHY 2101 and PHY 2102 BOTH of the courses above or ONE of the courses below. OR CHEM 2120	Statics and Dynamics Both courses above combined or any one of the following courses will satisfy a required engineering science elective. OR Organic Chemistry I	3	CIV ENG 2200 and MECH ENG 2350 BOTH of the courses above or ONE of the courses below. OR CHEM 2210	Engineering Mechanics-Statics (3) and Engineering Mechanics-Dynamics (2) Both courses above combined or any one of the following courses will satisfy a required engineering science elective. OR Organic Chemistry I (3)	3
PHY 2121	Electrical Engineering Circuits	4	ELEC ENG 2100*, 2101	Circuits I* (3) and Circuit Analysis Lab (1) *A passing grade on the Missouri S&T ELEC ENG 2100 final exam is required to receive credit for ELEC ENG 2100. Without the required passing score the lecture will transfer as ELEC ENG 2800.	4
MATH 2108	Linear Algebra	3	MATH 3108	Linear Algebra	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**					
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.					
ENGL 2109 or ENGL 2110 or ENGL 2111 or ENGL 2112 or **HIST 2101*** or **HIST 2102*** or ART 1101 or MUSI 1100 or THEA 1106	British Literature-Beowulf to 1799 or British Literature-1800 to Present or American Literature to 1865 or American Literature, 1865 to Present or **American History I*** or **American History II*** or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or **HISTORY 1300*** or **HISTORY 1310*** or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1600 to 1865 or American Literature: 1865 to Present or **American History to 1877*** or **American History Since 1877*** or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. ***Satisfies the State of Missouri government requirement.**	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.					
HIST 1101 or **HIST 1102*** or GEOG 1101 or PHIL 1101 or PHIL 2101 or **POLI 2101*** or PSYC 2101 or ECON 2102 or ECON 2101 or Foreign Language	Western Civilization I or **Western Civilization II*** or Intro to Geography or Intro to Philosophy or Logic or **American Government*** or Intro to Psychology or Principles of Economics II or Principles of Economics I or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6	HISTORY 1100 or **HISTORY 1200*** or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or **Modern Western Civilization*** or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or **American Government*** or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6
Humanities, Arts, and Social Sciences Select 3 hours.					
ENGL 1102	Rhetoric and Composition II	3	ENGLISH 1160	Writing and Research	3
Electives	Maximum Free Electives	6	Electives	Maximum Free Electives	6
	Group 2 Major Requirements	39		Group 2 Major Requirements	39
	Group 1 Core Requirements	30		Group 1 Core Requirements	26
	Total Hours	69		Total Hours*	65
				*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

Rend Lake College		Semester	Missouri S&T		Semester
COM 1101	Principles of Effective Public Speaking	3	SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHE 1103	Inorganic Chemistry	5	CHEM 1310, 1319	General Chemistry I and Lab	5
PHY 2121	Electrical Engineering Circuits	4	ELEC ENG 2800	Electrical Circuits	3
PHY 2101	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
PHY 2102	Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	2
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**					
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.					
ENGL 2109 or ENGL 2110 or ENGL 2111 or ENGL 2112 or **HIST 2101*** or **HIST 2102*** or ART 1101 or MUSI 1100 or THEA 1106	British Literature-Beowulf to 1799 or British Literature-1800 to Present or American Literature to 1865 or American Literature, 1865 to Present or **American History I*** or **American History II*** or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or **HISTORY 1300*** or **HISTORY 1310*** or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1600 to 1865 or American Literature: 1865 to Present or **American History to 1877*** or **American History Since 1877*** or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. ***Satisfies the State of Missouri government requirement.**	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines to include PSYCH 1101.					
PSYC 2101	Intro to Psychology	3	PSYCH 1101	General Psychology Required	3
HIST 1101 or **HIST 1102*** or GEOG 1101 or PHIL 1101 or PHIL 2101 or **POLI 2101*** or ECON 2102 or ECON 2101 or Foreign Language	Western Civilization I or **Western Civilization II*** or Intro to Geography or Intro to Philosophy or Logic or **American Government*** or Principles of Economics II or Principles of Economics I or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	3	HISTORY 1100 or **HISTORY 1200*** or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or **Modern Western Civilization*** or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or **American Government***or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	3
Humanities, Arts, and Social Sciences Select 3 hours.					
ENGL 1102	Rhetoric and Composition II	3	ENGLISH 1160	Writing and Research	3
	No free electives applied to the degree.	0	Electives	Maximum Free Electives	0
	Group 2 Major Requirements	33		Group 2 Major Requirements	31
	Group 1 Core Requirements	30		Group 1 Core Requirements	26
	Total Hours	63		Total Hours*	57

*S&T advisor permission is required to transfer more than 61 credits toward the S&T Engineering Management degree.

Environmental Engineering Group 2 Major Requirements

Rend Lake College			Semester	Missouri S&T		
ENGL 1102 or COMM 1101	Rhetoric and Composition II or Principles of Effective Public Speaking	3		ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHE 1103	Inorganic Chemistry	5		CHEM 1310, 1319	General Chemistry I and Lab	5
CHE 1104	Qualitative Analysis and Inorganic Chemistry	5		CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
BIO 1101	College Biology	5		BIO SCI 1113, 1219*	General Biology (3) and Lab* (1) *The lab is not a degree requirement, transfers as general elective credit.	3
PHY 2101	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
PHY 2102	Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 12 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, or 1310 to satisfy the State of Missouri government requirement and a degree-specific gen ed requirement.**						
Humanities and Fine Arts Select 6 hours from at least two specific disciplines. At least one course in either the HFA or the BSS (below) section must be selected from HISTORY 1200, 1300, or 1310.						
ENGL 2109 or ENGL 2110 or ENGL 2111 or ENGL 2112 or **HIST 2101*** or **HIST 2102*** or ART 1101 or MUSI 1100 or THEA 1106	British Literature-Beowulf to 1799 or British Literature-1800 to Present or American Literature to 1865 or American Literature, 1865 to Present or **American History I*** or **American History II*** or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or **HISTORY 1300*** or **HISTORY 1310*** or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1600 to 1865 or American Literature: 1865 to Present or **American History to 1877*** or **American History Since 1877*** or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. ***Satisfies the State of Missouri government requirement.**	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.. At least one course in either the HFA (above) or the BSS section must be selected from HISTORY 1200, 1300, or 1310.						
HIST 1102* or PHIL 1101 or PHIL 2101 or PSYC 2101 or ECON 2102 or ECON 2101 or Foreign Language	**Western Civilization II*** or Intro to Philosophy or Logic or Intro to Psychology or Principles of Economics II or Principles of Economics I or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6		**HISTORY 1200*** or PHILOS 1105 or PHILOS 1115 or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	**Modern Western Civilization*** or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement and a degree-specific gen ed requirement.**	6
	No free electives applied to the degree.	0			Maximum Free Electives	0
	Group 2 Major Requirements	36			Group 2 Major Requirements	31
	Group 1 Core Requirements	30			Group 1 Core Requirements	26
	Total Hours	66			Total Hours*	57
					*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

	Rend Lake College	Semester		Missouri S&T	
CHE 1103	Inorganic Chemistry	5	CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
PHY 2101	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
PHY 2102	Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	2
	Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**				
	Humanities and Fine Arts Select 6 hours from at least two specific disciplines.				
ENGL 2109 or ENGL 2110 or ENGL 2111 or ENGL 2112 or **HIST 2101*** or **HIST 2102*** or ART 1101 or MUSI 1100 or THEA 1106	British Literature-Beowulf to 1799 or British Literature-1800 to Present or American Literature to 1865 or American Literature, 1865 to Present or **American History I*** or **American History II*** or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or **HISTORY 1300*** or **HISTORY 1310*** or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1600 to 1865 or American Literature: 1865 to Present or **American History to 1877*** or **American History Since 1877*** or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. ***Satisfies the State of Missouri government requirement.**	6
	Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.				
HIST 1101 or **HIST 1102*** or GEOG 1101 or PHIL 1101 or PHIL 2101 or **POLI 2101*** or PSYC 2101 or ECON 2102 or ECON 2101 or Foreign Language	Western Civilization I or **Western Civilization II*** or Intro to Geography or Intro to Philosophy or Logic or **American Government*** or Intro to Psychology or Principles of Economics II or Principles of Economics I or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6	HISTORY 1100 or **HISTORY 1200*** or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or **Modern Western Civilization*** or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or **American Government*** or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6
	Humanities, Arts, and Social Sciences Select 3 hours.				
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3	HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	No free electives applied to the degree.	0		Maximum Free Electives	0
	Group 2 Major Requirements	26		Group 2 Major Requirements	25
	Group 1 Core Requirements	30		Group 1 Core Requirements	26
	Total Hours	56		Total Hours*	51
				*S&T advisor permission is required to transfer more than 65 credits toward the S&T Geological Engineering degree.	

Mechanical Engineering Group 2 Major Requirements

Rend Lake College		Semester	Missouri S&T	
ENGL 1102 or COMM 1101	Rhetoric and Composition II or Principles of Effective Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement. 3
CHE 1103	Inorganic Chemistry	5	CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305. 5
PHY 2121	Electrical Engineering Circuits	4	ELEC ENG 2800	Electrical Circuits 3
PHY 2101	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics 3
MATH 2108	Linear Algebra	3	MATH 3108	Linear Algebra I Satisfies the Advanced Math/Statistics elective requirement. 3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**				
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.				
ENGL 2109 or ENGL 2110 or ENGL 2111 or ENGL 2112 or **HIST 2101*** or **HIST 2102*** or ART 1101 or MUSI 1100 or THEA 1106	British Literature-Beowulf to 1799 or British Literature-1800 to Present or American Literature to 1865 or American Literature, 1865 to Present or **American History I*** or **American History II*** or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or **HISTORY 1300*** or **HISTORY 1310*** or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1600 to 1865 or American Literature: 1865 to Present or **American History to 1877*** or **American History Since 1877*** or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. ***Satisfies the State of Missouri government requirement.** 6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.				
HIST 1101 or **HIST 1102*** or GEOG 1101 or PHIL 1101 or PHIL 2101 or **POLI 2101*** or PSYC 2101 or ECON 2102 or ECON 2101 or Foreign Language	Western Civilization I or **Western Civilization II*** or Intro to Geography or Intro to Philosophy or Logic or **American Government*** or Intro to Psychology or Principles of Economics II or Principles of Economics I or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6	HISTORY 1100 or **HISTORY 1200*** or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or **Modern Western Civilization*** or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or **American Government*** or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.** 6
Humanities, Arts, and Social Sciences Select 3 hours.				
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3	HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language. 3
	No free electives applied to the degree.	0		Maximum Free Electives 0
	Group 2 Major Requirements	33		Group 2 Major Requirements 32
	Group 1 Core Requirements	30		Group 1 Core Requirements 26
	Total Hours	63		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

Rend Lake College		Semester	Missouri S&T		
ENGL 1102 or COMM 1101	Rhetoric and Composition II or Principles of Effective Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
PHY 2101	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
CHE 1103	Inorganic Chemistry	5	CHEM 1310, 1319	General Chemistry I and Lab	5
CHE 1104	Qualitative Analysis and Inorganic Chemistry	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
CHE 2120 or PHY 2121	Organic Chemistry I (5) or Electrical Engineering Circuits (4)	5	CHEM 2210 or ELEC ENG 2800	Organic Chemistry I or Electrical Circuits Not specifically required for the degree but will satisfy Out-of-Department Technical Elective Requirement.	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**					
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.					
ENGL 2109 or ENGL 2110 or ENGL 2111 or ENGL 2112 or **HIST 2101*** or **HIST 2102*** or ART 1101 or MUSI 1100 or THEA 1106	British Literature-Beowulf to 1799 or British Literature-1800 to Present or American Literature to 1865 or American Literature, 1865 to Present or **American History I*** or **American History II*** or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or **HISTORY 1300*** or **HISTORY 1310*** or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1600 to 1865 or American Literature: 1865 to Present or **American History to 1877*** or **American History Since 1877*** or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. ***Satisfies the State of Missouri government requirement.**	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.					
HIST 1101 or **HIST 1102*** or GEOG 1101 or PHIL 1101 or PHIL 2101 or **POLI 2101*** or PSYC 2101 or ECON 2102 or ECON 2101 or Foreign Language	Western Civilization I or **Western Civilization II*** or Intro to Geography or Intro to Philosophy or Logic or **American Government*** or Intro to Psychology or Principles of Economics II or Principles of Economics I or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6	HISTORY 1100 or **HISTORY 1200*** or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or **Modern Western Civilization*** or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or **American Government*** or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6
Humanities, Arts, and Social Sciences Select 3 hours.					
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3	HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	No free electives applied to the degree.	0		Maximum Free Electives	0
	Group 2 Major Requirements	36		Group 2 Major Requirements	32
	Group 1 Core Requirements	30		Group 1 Core Requirements	26
	Total Hours	66		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

Rend Lake College			Semester	Missouri S&T		
ENGL 1102 or COMM 1101	Rhetoric and Composition II or Principles of Effective Public Speaking	3		ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHE 1103	Inorganic Chemistry	5		CHEM 1310, 1319	General Chemistry I and Lab	5
PHY 2101	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
PHY 2102	Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 12 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**						
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.						
ENGL 2109 or ENGL 2110 or ENGL 2111 or ENGL 2112 or **HIST 2101*** or **HIST 2102*** or ART 1101 or MUSI 1100 or THEA 1106	British Literature-Beowulf to 1799 or British Literature-1800 to Present or American Literature to 1865 or American Literature, 1865 to Present or **American History I*** or **American History II*** or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or **HISTORY 1300*** or **HISTORY 1310*** or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1600 to 1865 or American Literature: 1865 to Present or **American History to 1877*** or **American History Since 1877*** or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. ***Satisfies the State of Missouri government requirement.**	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.						
HIST 1101 or **HIST 1102*** or GEOG 1101 or PHIL 1101 or PHIL 2101 or **POLI 2101*** or PSYC 2101 or ECON 2102 or ECON 2101 or Foreign Language	Western Civilization I or **Western Civilization II*** or Intro to Geography or Intro to Philosophy or Logic or **American Government*** or Intro to Psychology or Principles of Economics II or Principles of Economics I or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6		HISTORY 1100 or **HISTORY 1200*** or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or **Modern Western Civilization*** or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or **American Government*** or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6
	No free electives applied to the degree.	0			Maximum Free Electives	0
	Group 2 Major Requirements	26			Group 2 Major Requirements	25
	Group 1 Core Requirements	30			Group 1 Core Requirements	26
	Total Hours	56			Total Hours*	51

*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

Rend Lake College		Semester	Missouri S&T		
ENGL 1102 or COMM 1101	Rhetoric and Composition II or Principles of Effective Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHE 1103	Inorganic Chemistry	5	CHEM 1310, 1319	General Chemistry I and Lab	5
MATH 2108	Linear Algebra	3	MATH 3108	Linear Algebra	3
PHY 2101	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
PHY 2121	Electrical Engineering Circuits	4	ELEC ENG 2800	Electrical Circuits	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**					
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.					
ENGL 2109 or ENGL 2110 or ENGL 2111 or ENGL 2112 or **HIST 2101*** or **HIST 2102*** or ART 1101 or MUSI 1100 or THEA 1106	British Literature-Beowulf to 1799 or British Literature-1800 to Present or American Literature to 1865 or American Literature, 1865 to Present or **American History I*** or **American History II*** or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or **HISTORY 1300*** or **HISTORY 1310*** or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1600 to 1865 or American Literature: 1865 to Present or **American History to 1877*** or **American History Since 1877*** or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. ***Satisfies the State of Missouri government requirement.**	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines to include either ECON 1100 or 1200.					
ECON 2102 or ECON 2101	Principles of Economics II or Principles of Economics I	3	ECON 1100 or ECON 1200	Principles of Microeconomics or Principles of Macroeconomics	3
HIST 1101 or **HIST 1102*** or GEOG 1101 or PHIL 1101 or PHIL 2101 or **POLI 2101*** or PSYC 2101 or Foreign Language	Western Civilization I or **Western Civilization II*** or Intro to Geography or Intro to Philosophy or Logic or **American Government*** or Intro to Psychology or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	3	HISTORY 1100 or **HISTORY 1200*** or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or Foreign Language	Early Western Civilization or **Modern Western Civilization*** or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or **American Government***or General Psychology or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	3
Humanities, Arts, and Social Sciences Select 3 hours.					
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3	HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	Maximum Free Electives	0		Maximum Free Electives	0
	Group 2 Major Requirements	33		Group 2 Major Requirements	32
	Group 1 Core Requirements	30		Group 1 Core Requirements	26
	Total Hours	63		Total Hours*	58
				*S&T advisor permission is required to transfer more than 69 credits toward the S&T Nuclear Engineering degree.	

Petroleum Engineering Group 2 Major Requirements

Rend Lake College		Semester	Missouri S&T		
ENGL 1102	Rhetoric and Composition II	3	ENGLISH 1160	Writing and Research Applies to degree as Gen Ed Communication requirement.	3
CHE 1103	Inorganic Chemistry	5	CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
PHY 2101	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
PHY 2102	Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	2
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**					
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.					
ENGL 2109 or ENGL 2110 or ENGL 2111 or ENGL 2112 or **HIST 2101*** or **HIST 2102*** or ART 1101 or MUSI 1100 or THEA 1106	British Literature-Beowulf to 1799 or British Literature-1800 to Present or American Literature to 1865 or American Literature, 1865 to Present or **American History I*** or **American History II*** or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or **HISTORY 1300*** or **HISTORY 1310*** or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1600 to 1865 or American Literature: 1865 to Present or **American History to 1877*** or **American History Since 1877*** or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. ***Satisfies the State of Missouri government requirement.**	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.					
HIST 1101 or **HIST 1102*** or GEOG 1101 or PHIL 1101 or PHIL 2101 or **POLI 2101*** or PSYC 2101 or ECON 2102 or ECON 2101 or Foreign Language	Western Civilization I or **Western Civilization II*** or Intro to Geography or Intro to Philosophy or Logic or **American Government*** or Intro to Psychology or Principles of Economics II or Principles of Economics I or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6	HISTORY 1100 or **HISTORY 1200*** or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or **Modern Western Civilization*** or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or **American Government*** or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6
Humanities, Arts, and Social Sciences Select 3 hours.					
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3	HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	No free electives applied to the degree.	0		Maximum Free Electives	0
	Group 2 Major Requirements	29		Group 2 Major Requirements	28
	Group 1 Core Requirements	30		Group 1 Core Requirements	26
	Total Hours	59		Total Hours*	54
				*S&T advisor permission is required to transfer more than 69 credits toward the S&T Petroleum Engineering degree.	

Semiconductor Engineering-Device Engineering Emphasis
Group 2 Major Requirements

Rend Lake College		Semester	Missouri S&T		Semester
ENGL 1102 or COMM 1101	Rhetoric and Composition II or Principles of Effective Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHE 1103	Inorganic Chemistry	5	CHEM 1310, 1319	General Chemistry I and Lab	5
CHE 1104	Qualitative Analysis and Inorganic Chemistry	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
PHY 2121	Electrical Engineering Circuits	4	ELEC ENG 2100*, 2101	Circuits I* (3) and Circuit Analysis Lab (1) *A passing grade on the Missouri S&T ELEC ENG 2100 final exam is required to receive credit for ELEC ENG 2100. Without the required passing score the lecture will transfer as ELEC ENG 2800.	4
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**					
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.					
ENGL 2109 or ENGL 2110 or ENGL 2111 or ENGL 2112 or **HIST 2101*** or **HIST 2102*** or ART 1101 or MUSI 1100 or THEA 1106	British Literature-Beowulf to 1799 or British Literature-1800 to Present or American Literature to 1865 or American Literature, 1865 to Present or **American History I*** or **American History II*** or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or **HISTORY 1300*** or **HISTORY 1310*** or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1600 to 1865 or American Literature: 1865 to Present or **American History to 1877*** or **American History Since 1877*** or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. ***Satisfies the State of Missouri government requirement.**	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.					
HIST 1101 or **HIST 1102*** or GEOG 1101 or PHIL 1101 or PHIL 2101 or **POLI 2101*** or PSYC 2101 or ECON 2102 or ECON 2101 or Foreign Language	Western Civilization I or **Western Civilization II*** or Intro to Geography or Intro to Philosophy or Logic or **American Government*** or Intro to Psychology or Principles of Economics II or Principles of Economics I or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6	HISTORY 1100 or **HISTORY 1200*** or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or **Modern Western Civilization*** or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or **American Government*** or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6
Humanities, Arts, and Social Sciences Select 3 hours.					
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3	HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	Maximum Free Electives	3		Maximum Free Electives	3
	Group 2 Major Requirements	35		Group 2 Major Requirements	33
	Group 1 Core Requirements	30		Group 1 Core Requirements	26
	Total Hours	65		Total Hours*	59
				*S&T advisor permission is required to transfer more than 68 credits toward the S&T Ceramic Engineering degree.	

Semiconductor Engineering-Process Engineering Emphasis
Group 2 Major Requirements

Rend Lake College		Semester	Missouri S&T		
ENGL 1102 or COMM 1101	Rhetoric and Composition II or Principles of Effective Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHE 1103	Inorganic Chemistry	5	CHEM 1310, 1319	General Chemistry I and Lab	5
CHE 1104	Qualitative Analysis and Inorganic Chemistry	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
PHY 2121	Electrical Engineering Circuits	4	ELEC ENG 2100*, 2101	Circuits I* (3) and Circuit Analysis Lab (1) *A passing grade on the Missouri S&T ELEC ENG 2100 final exam is required to receive credit for ELEC ENG 2100. Without the required passing score the lecture will transfer as ELEC ENG 2800.	4
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**					
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.					
ENGL 2109 or ENGL 2110 or ENGL 2111 or ENGL 2112 or **HIST 2101*** or **HIST 2102*** or ART 1101 or MUSI 1100 or THEA 1106	British Literature-Beowulf to 1799 or British Literature-1800 to Present or American Literature to 1865 or American Literature, 1865 to Present or **American History I*** or **American History II*** or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or **HISTORY 1300*** or **HISTORY 1310*** or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1600 to 1865 or American Literature: 1865 to Present or **American History to 1877*** or **American History Since 1877*** or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. ***Satisfies the State of Missouri government requirement.**	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.					
HIST 1101 or **HIST 1102*** or GEOG 1101 or PHIL 1101 or PHIL 2101 or **POLI 2101*** or PSYC 2101 or ECON 2102 or ECON 2101 or Foreign Language	Western Civilization I or **Western Civilization II*** or Intro to Geography or Intro to Philosophy or Logic or **American Government*** or Intro to Psychology or Principles of Economics II or Principles of Economics I or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6	HISTORY 1100 or **HISTORY 1200*** or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or **Modern Western Civilization*** or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or **American Government*** or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6
Humanities, Arts, and Social Sciences Select 3 hours.					
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3	HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	Maximum Free Electives	3		Maximum Free Electives	3
	Group 2 Major Requirements	35		Group 2 Major Requirements	33
	Group 1 Core Requirements	30		Group 1 Core Requirements	26
	Total Hours	65		Total Hours*	59
				*S&T advisor permission is required to transfer more than 68 credits toward the S&T Ceramic Engineering degree.	