

State Fair Community College — Missouri S&T

General Engineering

Transfer Guide Effective as of Fall 2025

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.

State Fair Community College			Semester	Missouri S&T		
MATH 130	Calculus and Analytic Geometry I	5		MATH 1214	Calculus I	Grade of C or better is required. 4
MATH 131	Calculus and Analytic Geometry II	5		MATH 1215	Calculus II	Grade of C or better is required. 4
MATH 132	Calculus and Analytic Geometry III	5		MATH 2222	Calculus III	Grade of C or better is required. 4
MATH 134	Differential Equations	3		MATH 3304	Elementary Differential Equations	3
PHYS 211	Engineering Physics I with Lab	5		PHYSICS 1135	Engineering Physics I	Grade of C or better is required. 4
PHYS 212	Engineering Physics II with Lab	5		PHYSICS 2135	Engineering Physics II	Grade of C or better is required. 4
ENGL 101	English Composition I	3		ENGLISH 1120	Exposition and Argumentation	3
		Total Hours	31			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 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.

This transfer guide is published by Missouri University of Science and Technology and is in effect as of Fall 2025.
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

State Fair Community College		Semester	Missouri S&T			
ENGL 102 or COM 101	English Composition II or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small>	3	
CHEM 123	General Chemistry I with Lab	4	CHEM 1310*, 1319	General Chemistry I and Lab <small>*CHEM 1310 will be substituted for CHEM 1305.</small>	5	
PHYS 235	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3	
PHIL 102	Ethics <small>or other engineering, business, bio, social ethics approved by advisor</small>	3	PHILOS 1130	How Should I Live? An Introduction to Ethics <small>or other engineering, business, bio, social ethics approved by advisor</small>	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.						
LIT 109 or LIT 107 or LIT 112 or HIST 101* or HIST 102* or ART 101 or MUS 101 or THEA 107	British Literature or American Literature or World Literature or US History Before 1877* or US History Since 1877* or Art Appreciation or Music Appreciation or Intro to Theatre <small>*Satisfies the State of Missouri government requirement.</small>	6	ENGLISH 1211 or ENGLISH 1221 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1150	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre for Social Change <small>*Satisfies the State of Missouri government requirement.</small>	6	
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.						
HIST 108 or HIST 109* or GEOG 101 or PHIL 101 or POLS 101* or PSY 101 or ECON 102 or ECON 101 or Foreign Language	World Civilization Before 1500 or World Civilization After 1500* or World Regional Geography or Intro to Philosophy or American/National Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 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 American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	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		28	Group 2 Major Requirements		29	
Group 1 Core Requirements		31	Group 1 Core Requirements		26	
Total Hours		59			Total Hours*	55
<small>*S&T advisor permission is required to transfer more than 68 credits toward the S&T Aerospace Engineering degree.</small>						

Architectural Engineering Group 2 Major Requirements

State Fair Community College		Semester	Missouri S&T		
ENGL 102 or COM 101	English Composition II or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small>	3
CHEM 123	General Chemistry I with Lab	4	CHEM 1310*, 1319	General Chemistry I and Lab <small>*CHEM 1310 will be substituted for CHEM 1305.</small>	5
PHYS 235	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
EASC 118	Environmental Geology	3	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
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.					
LIT 109 or LIT 107 or LIT 112 or HIST 101* or HIST 102* or ART 101 or MUS 101 or THEA 107	British Literature or American Literature or World Literature or US History Before 1877* or US History Since 1877* or Art Appreciation or Music Appreciation or Intro to Theatre <small>*Satisfies the State of Missouri government requirement.</small>	6	ENGLISH 1211 or ENGLISH 1221 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1150	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre for Social Change <small>*Satisfies the State of Missouri government requirement.</small>	6
Behavioral and Social Sciences					
Select 6 hours from at least two specific disciplines to include HISTORY 1200.					
HIST 109*	World Civilization After 1500* <small>*Satisfies the State of Missouri Government requirement.</small>	3	HISTORY 1200*	Modern Western Civilization* <small>*Satisfies the State of Missouri Government requirement.</small>	3
PHL 101 or POLS 101* or PSY 101 or ECON 102 or ECON 101 or Foreign Language	Intro to Philosophy or American/National Government* or General Psychology or Principles of Macroeconomics or Principles of Microeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	3	PHIL 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Self and World: Intro to Philosophy or American Government* or General Psychology or Principles of Macroeconomics or Principles of Microeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	3
No free electives applied to the degree.		0	Maximum Free Electives		0
Group 2 Major Requirements		25	Group 2 Major Requirements		26
Group 1 Core Requirements		31	Group 1 Core Requirements		26
Total Hours		56			Total Hours*
					52
<small>*S&T advisor permission is required to transfer more than 69 credits toward the S&T Architectural Engineering degree.</small>					

Biomedical Engineering-Biomanufacturing Group 2 Major Requirements

State Fair Community College		Semester	Missouri S&T		
COM 101	Public Speaking	3	SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 123	General Chemistry I with Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 124	General Chemistry II with Lab	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
CHEM 221	Organic Chemistry I with Lab	5	CHEM 2210, 2219	Organic Chemistry I and Lab	4
CHEM 222 or BIO 112 or BIO 125 or BIO 210	Organic Chemistry II with Lab (5) or Intro to Biology with Lab (5) or Biology I with Lab (5) or Principles of Genetics with Lab (4)	4	CHEM 2220, 2229 or BIO SCI 1113, 1219 or BIO SCI 1213*, 1219 or BIO SCI 2223	Organic Chemistry II and Lab or General Biology and Lab or Principles of Biology* and Lab or General Genetics Applies to degree as Track Elective. *BIO SCI 1213 will be substituted for BIO SCI 1113.	4
CIS 120 or CIS155	Programming in Python or Programming in C#	3	COMP SCI 1500	Computational Problem Solving	3
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 3hours 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.					
LIT 109 or LIT 107 or LIT 112 or HIST 101* or HIST 102* or ART 101 or MUS 101 or THEA 107	British Literature or American Literature or World Literature or US History Before 1877* or US History Since 1877* or Art Appreciation or Music Appreciation or Intro to Theatre *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1221 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1150	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre for Social Change *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences Select 3 hours.					
HIST 108 or HIST 109* or GEOG 101 or POLS 101* or PSY 101 or ECON 102 or ECON 101 or Foreign Language	World Civilization Before 1500 or World Civilization After 1500* or World Regional Geography or American/National 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	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		33	Group 2 Major Requirements		31
Group 1 Core Requirements		31	Group 1 Core Requirements		26
Total Hours		64	Total Hours*		57
*S&T advisor permission is required to transfer more than 69 credit hours toward the degree.					

Biomedical Engineering-Biomaterials Group 2 Major Requirements

State Fair Community College			Semester	Missouri S&T		
COM 101	Public Speaking	3		SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 123	General Chemistry I with Lab	4		CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 124	General Chemistry II with Lab	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
CHEM 221	Organic Chemistry I with Lab	5		CHEM 2210, 2219*	Organic Chemistry I and Lab* *CHEM 2219 Lab applies to the degree as a Track Elective (non-engineering).	4
CHEM 222	Organic Chemistry II with Lab	5		CHEM 2220, 2229*	Organic Chemistry II and Lab* CHEM 2229 Lab applies to the degree as a Track Elective (non-engineering).	4
BIO 112 or BIO 125	Intro to Biology with Lab (5) or Biology I with Lab (5)	4		BIO SCI 1113*, 1219*	General Biology* and Lab* *Applies to degree as Track Elective (Non-engineering).	4
CIS 120 or CIS155	Programming in Python or Programming in C#	3		COMP SCI 1500	Computational Problem Solving	3
PHYS 235	Engineering Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
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 3hours 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.						
LIT 109 or LIT 107 or LIT 112 or HIST 101* or HIST 102* or ART 101 or MUS 101 or THEA 107	British Literature or American Literature or World Literature or US History Before 1877* or US History Since 1877* or Art Appreciation or Music Appreciation or Intro to Theatre *Satisfies the State of Missouri government requirement.	6		ENGLISH 1211 or ENGLISH 1221 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1150	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre for Social Change *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences Select 3 hours.						
HIST 108 or HIST 109* or GEOG 101 or POLS 101* or PSY 101 or ECON 102 or ECON 101 or Foreign Language	World Civilization Before 1500 or World Civilization After 1500* or World Regional Geography or American/National 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		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		
Group 2 Major Requirements			41	Group 2 Major Requirements		
Group 1 Core Requirements			31	Group 1 Core Requirements		
Total Hours			72	Total Hours*		
				64		

*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

State Fair Community College		Semester	Missouri S&T			
ENGL 102 or COM 101	English Composition II or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small>	3	
PHYS 235	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3	
CHEM 123	General Chemistry I with Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5	
CHEM 124	General Chemistry II with Lab	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) <small>*CHEM 1510 is not a degree requirement, transfers as general elective credit.</small>	3	
CHEM 221	Organic Chemistry I with Lab	5	CHEM 2210, 2219*	Organic Chemistry I (3) and Lab* (1) <small>Satisfies the advanced chemistry elective requirement. *The lab is not a degree requirement, transfers as general elective credit.</small>	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.						
LIT 109 or LIT 107 or LIT 112 or HIST 101* or HIST 102* or ART 101 or MUS 101 or THEA 107	British Literature or American Literature or World Literature or US History Before 1877* or US History Since 1877* or Art Appreciation or Music Appreciation or Intro to Theatre <small>*Satisfies the State of Missouri government requirement.</small>	6	ENGLISH 1211 or ENGLISH 1221 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1150	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre for Social Change <small>*Satisfies the State of Missouri government requirement.</small>	6	
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.						
HIST 108 or HIST 109* or GEOG 101 or PHIL 101 or POLS 101* or PSY 101 or ECON 102 or ECON 101 or Foreign Language	World Civilization Before 1500 or World Civilization After 1500* or World Regional Geography or Intro to Philosophy or American/National Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 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 American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	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		35	Group 2 Major Requirements		32	
Group 1 Core Requirements		31	Group 1 Core Requirements		26	
Total Hours		66			Total Hours*	58
<small>*S&T advisor permission is required to transfer more than 68 credits toward the S&T Ceramic Engineering degree.</small>						

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

State Fair Community College		Semester	Missouri S&T		
COM 101	Public Speaking	3	SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 123	General Chemistry I with Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 124	General Chemistry II with Lab	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
CHEM 221	Organic Chemistry I with Lab	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
CHEM 222	Organic Chemistry II with Lab	5	CHEM 2220, 2229	Organic Chemistry II (3) and Lab (1) CHEM 2220 will apply to the degree as 3 of the 9 science elective credits. CHEM 2229 is not required for the S&T degree, will transfer as general elective credit.	3
CIS 120 or CIS155	Programming in Python or Programming in C#	3	COMP SCI 1500	Computational Problem Solving	3
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.					
LIT 109 or LIT 107 or LIT 112 or HIST 101* or HIST 102* or ART 101 or MUS 101 or THEA 107	British Literature or American Literature or World Literature or US History Before 1877* or US History Since 1877* or Art Appreciation or Music Appreciation or Intro to Theatre *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1221 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1150	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre for Social Change *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.					
HIST 108 or HIST 109* or GEOG 101 or PHL 101 or POLS 101* or PSY 101 or ECON 102 or ECON 101 or Foreign Language	World Civilization Before 1500 or World Civilization After 1500* or World Regional Geography or Intro to Philosophy or American/National 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	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 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 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		37	Group 2 Major Requirements		33
Group 1 Core Requirements		31	Group 1 Core Requirements		26
Total Hours		68			Total Hours* 59
*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

State Fair Community College		Semester	Missouri S&T			
ENGL 102 or COM 101	English Composition II or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small>	3	
CHEM 123	General Chemistry I with Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5	
EASC 118	Environmental Geology	3	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3	
PHYS 235	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	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.						
LIT 109 or LIT 107 or LIT 112 or HIST 101* or HIST 102* or ART 101 or MUS 101 or THEA 107	British Literature or American Literature or World Literature or US History Before 1877* or US History Since 1877* or Art Appreciation or Music Appreciation or Intro to Theatre <small>*Satisfies the State of Missouri government requirement.</small>	6	ENGLISH 1211 or ENGLISH 1221 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1150	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre for Social Change <small>*Satisfies the State of Missouri government requirement.</small>	6	
Behavioral and Social Sciences						
Select 6 hours from at least two specific disciplines.						
HIST 108 or HIST 109* or GEOG 101 or PHIL 101 or POLS 101* or PSY 101 or ECON 102 or ECON 101 or Foreign Language	World Civilization Before 1500 or World Civilization After 1500* or World Regional Geography or Intro to Philosophy or American/National Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 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 American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	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		28	Group 2 Major Requirements		29	
Group 1 Core Requirements		31	Group 1 Core Requirements		26	
Total Hours		59			Total Hours*	55
<small>*S&T advisor permission is required to transfer more than 69 credits toward the S&T Civil Engineering degree.</small>						

Computer Engineering Group 2 Major Requirements

State Fair Community College		Semester	Missouri S&T		
COM 101	Public Speaking	3	SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 123	General Chemistry I with Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5
CIS 120 or CIS155	Programming in Python or Programming in C#	3	COMP SCI 1500	Computational Problem Solving	3
PHYS 235 or CHEM 221 or BIO 210	Engineering Statics or Organic Chemistry I with Lab or Principles of Genetics with Lab	3	CIV ENG 2200 or CHEM 2210 or BIO SCI 2223	Engineering Mechanics-Statics (3) or Organic Chemistry I (3) or General Genetics (3) Satisfies a required engineering/science elective.	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.					
LIT 109 or LIT 107 or LIT 112 or HIST 101* or HIST 102* or ART 101 or MUS 101 or THEA 107	British Literature or American Literature or World Literature or US History Before 1877* or US History Since 1877* or Art Appreciation or Music Appreciation or Intro to Theatre *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1221 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1150	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre for Social Change *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.					
HIST 108 or HIST 109* or GEOG 101 or PHIL 101 or POLS 101* or PSY 101 or ECON 102 or ECON 101 or Foreign Language	World Civilization Before 1500 or World Civilization After 1500* or World Regional Geography or Intro to Philosophy or American/National 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	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 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 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.					
ENG 102	English Composition II	3	ENGLISH 1160	Writing and Research	3
Electives	Maximum Free Electives	3	Electives	Maximum Free Electives	3
	Group 2 Major Requirements	31		Group 2 Major Requirements	32
	Group 1 Core Requirements	31		Group 1 Core Requirements	26
	Total Hours	62		Total Hours*	58
*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

State Fair Community College			Semester	Missouri S&T	
COM 101	Public Speaking	3	SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 123	General Chemistry I with Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5
CIS 120 or CIS155	Programming in Python or Programming in C#	3	COMP SCI 1500	Computational Problem Solving	3
MACC PHYS 235 and S&T MECH ENG 2350	MACC Engineering Statics* AND Missouri S&T Engineering Mechanics-Dynamics		CIV ENG 2200 and MECH ENG 2350	Engineering Mechanics-Statics (3) and Engineering Mechanics-Dynamics (2)	
BOTH of the courses above or ONE of the courses below.	Both courses above combined or any one of the following courses will satisfy a required engineering science elective.	OR 3	BOTH of the courses above or ONE of the courses below.	Both courses above combined or any one of the following courses satisfies a required engineering science elective.	3
OR	Organic Chemistry I with Lab or		OR	Organic Chemistry I (3) or	
CHEM 221 or BIO 210	Principles of Genetics w/ Lab		CHEM 2210 or BIO SCI 2223	General Genetics (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.					
LIT 109 or LIT 107 or LIT 112 or HIST 101* or HIST 102* or ART 101 or MUS 101 or THEA 107	British Literature or American Literature or World Literature or US History Before 1877* or US History Since 1877* or Art Appreciation or Music Appreciation or Intro to Theatre *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1221 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1150	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre for Social Change *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.					
HIST 108 or HIST 109* or GEOG 101 or PHIL 101 or POLS 101* or PSY 101 or ECON 102 or ECON 101 or Foreign Language	World Civilization Before 1500 or World Civilization After 1500* or World Regional Geography or Intro to Philosophy or American/National 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	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 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 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.					
ENG 102	English Composition II	3	ENGLISH 1160	Writing and Research	3
Electives	Maximum Free Electives	6	Electives	Maximum Free Electives	6
	Group 2 Major Requirements	34		Group 2 Major Requirements	35
	Group 1 Core Requirements	31		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 Electrical Engineering degree.					

*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

State Fair Community College		Semester	Missouri S&T			
COM 101	Public Speaking	3	SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3	
CHEM 123	General Chemistry I with Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5	
BSMT 108	Principles of Management	3	ENG MGT 2110	Managing Engineering and Technology	3	
PHYS 235	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	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.						
LIT 109 or LIT 107 or LIT 112 or HIST 101* or HIST 102* or ART 101 or MUS 101 or THEA 107	British Literature or American Literature or World Literature or US History Before 1877* or US History Since 1877* or Art Appreciation or Music Appreciation or Intro to Theatre *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1221 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1150	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre for Social Change *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.						
PSY 101	General Psychology	3	PSYCH 1101	General Psychology	3	
HIST 108 or HIST 109* or GEOG 101 or PHIL 101 or POLS 101* or ECON 102 or ECON 101 or Foreign Language	World Civilization Before 1500 or World Civilization After 1500* or World Regional Geography or Intro to Philosophy or American/National Government* or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 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 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.						
ENG 102	English 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		28	Group 2 Major Requirements		29	
Group 1 Core Requirements		31	Group 1 Core Requirements		26	
Total Hours		59			Total Hours*	61
*S&T advisor permission is required to transfer more than 61 credits toward the S&T Engineering Management degree.						

*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

State Fair Community College			Semester	Missouri S&T	
ENGL 102 or COM 101	English Composition II or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small>	3
EASC 118	Environmental Geology	3	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
CHEM 123	General Chemistry I with Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 124	General Chemistry II with Lab	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) <small>*CHEM 1510 is not a degree requirement, transfers as general elective credit.</small>	3
BIO 112 or BIO 125	Intro to Biology with Lab or Biology I with Lab	5	BIO SCI 1113, 1219* or BIO SCI 1213*, 1219*	General Biology (3) and Lab* (1) <small>*The lab is not a degree requirement, transfers as general elective credit. BIO SCI 1213 will be substituted for BIO SCI 1113.</small>	3
PHYS 235	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
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.					
LIT 109 or LIT 107 or LIT 112 or HIST 101* or HIST 102* or ART 101 or MUS 101 or THEA 107	British Literature or American Literature or World Literature or US History Before 1877* or US History Since 1877* or Art Appreciation or Music Appreciation or Intro to Theatre <small>*Satisfies the State of Missouri government requirement.</small>	6	ENGLISH 1211 or ENGLISH 1221 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1150	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre for Social Change <small>*Satisfies the State of Missouri government requirement.</small>	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines to include HISTORY 1200					
HIST 109*	World Civilization After 1500* <small>*Satisfies the State of Missouri Government requirement.</small>	3	HISTORY 1200*	Modern Western Civilization* <small>*Satisfies the State of Missouri Government requirement.</small>	3
PHL 101 or POLS 101* or PSY 101 or ECON 102 or ECON 101 or Foreign Language	Intro to Philosophy or American/National Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	3	PHIL 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Self and World: Intro to Philosophy or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	3
No free electives applied to the degree.		0	Maximum Free Electives		0
Group 2 Major Requirements		35	Group 2 Major Requirements		32
Group 1 Core Requirements		31	Group 1 Core Requirements		26
Total Hours		66			Total Hours* 58
<small>*S&T advisor permission is required to transfer more than 69 credits toward the S&T Environmental Engineering degree.</small>					

Geological Engineering Group 2 Major Requirements

State Fair Community College		Semester	Missouri S&T		
CHEM 123	General Chemistry I with Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5
CIS 120 or CIS155	Programming in Python or Programming in C#	3	COMP SCI 1500	Computational Problem Solving	3
EASC 118	Environmental Geology	3	GEO ENG 1150 (GEOLOGY 1110)	Physical and Environmental Geology	3
PHYS 235	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	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.					
LIT 109 or LIT 107 or LIT 112 or HIST 101* or HIST 102* or ART 101 or MUS 101 or THEA 107	British Literature or American Literature or World Literature or US History Before 1877* or US History Since 1877* or Art Appreciation or Music Appreciation or Intro to Theatre *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1221 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1150	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre for Social Change *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences					
Select 6 hours from at least two specific disciplines.					
HIST 108 or HIST 109* or GEOG 101 or PHIL 101 or POLS 101* or PSY 101 or ECON 102 or ECON 101 or Foreign Language	World Civilization Before 1500 or World Civilization After 1500* or World Regional Geography or Intro to Philosophy or American/National 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	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 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 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		28	Group 2 Major Requirements		29
Group 1 Core Requirements		31	Group 1 Core Requirements		26
Total Hours		59	Total Hours*		55
*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

State Fair Community College		Semester	Missouri S&T			
ENGL 102 or COM 101	English Composition II or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small>	3	
CHEM 123	General Chemistry I with Lab	4	CHEM 1310*, 1319	General Chemistry I and Lab <small>*CHEM 1310 will be substituted for CHEM 1305.</small>	5	
PHYS 235	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	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.						
LIT 109 or LIT 107 or LIT 112 or HIST 101* or HIST 102* or ART 101 or MUS 101 or THEA 107	British Literature or American Literature or World Literature or US History Before 1877* or US History Since 1877* or Art Appreciation or Music Appreciation or Intro to Theatre <small>*Satisfies the State of Missouri government requirement.</small>	6	ENGLISH 1211 or ENGLISH 1221 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1150	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre for Social Change <small>*Satisfies the State of Missouri government requirement.</small>	6	
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.						
HIST 108 or HIST 109* or GEOG 101 or PHIL 101 or POLS 101* or PSY 101 or ECON 102 or ECON 101 or Foreign Language	World Civilization Before 1500 or World Civilization After 1500* or World Regional Geography or Intro to Philosophy or American/National Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 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 American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	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		25	Group 2 Major Requirements		26	
Group 1 Core Requirements		31	Group 1 Core Requirements		26	
Total Hours		56			Total Hours*	52
<small>*S&T advisor permission is required to transfer more than 68 credits toward the S&T Mechanical Engineering degree.</small>						

Metallurgical Engineering Group 2 Major Requirements

State Fair Community College		Semester	Missouri S&T		
ENGL 102 or COM 101	English Composition II or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small>	3
PHYS 235	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
CHEM 123	General Chemistry I with Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 124	General Chemistry II with Lab	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) <small>*CHEM 1510 is not a degree requirement, transfers as general elective credit.</small>	3
CHEM 221	Organic Chemistry I with Lab	5	CHEM 2210, 2219*	Organic Chemistry I (3) and Lab* (1) <small>CHEM 2210 is not specifically required for the degree but will satisfy Out-of-Department Technical Elective Requirement. *CHEM 2219 is not a degree requirement, transfers as general credit.</small>	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.					
LIT 109 or LIT 107 or LIT 112 or HIST 101* or HIST 102* or ART 101 or MUS 101 or THEA 107	British Literature or American Literature or World Literature or US History Before 1877* or US History Since 1877* or Art Appreciation or Music Appreciation or Intro to Theatre <small>*Satisfies the State of Missouri government requirement.</small>	6	ENGLISH 1211 or ENGLISH 1221 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1150	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre for Social Change <small>*Satisfies the State of Missouri government requirement.</small>	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.					
HIST 108 or HIST 109* or GEOG 101 or PHIL 101 or POLS 101* or PSY 101 or ECON 102 or ECON 101 or Foreign Language	World Civilization Before 1500 or World Civilization After 1500* or World Regional Geography or Intro to Philosophy or American/National Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 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 American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	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		38	Group 2 Major Requirements		35
Group 1 Core Requirements		31	Group 1 Core Requirements		26
Total Hours		69			Total Hours*
<small>*S&T advisor permission is required to transfer more than 68 credits toward the S&T Metallurgical Engineering degree.</small>					

Mining Engineering Group 2 Major Requirements

State Fair Community College		Semester	Missouri S&T		
ENGL 102 or COM 101	English Composition II or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small>	3
CHEM 123	General Chemistry I with Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5
PHYS 235	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
EASC 118	Environmental Geology	3	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
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.					
LIT 109 or LIT 107 or LIT 112 or HIST 101* or HIST 102* or ART 101 or MUS 101 or THEA 107	British Literature or American Literature or World Literature or US History Before 1877* or US History Since 1877* or Art Appreciation or Music Appreciation or Intro to Theatre <small>*Satisfies the State of Missouri government requirement.</small>	6	ENGLISH 1211 or ENGLISH 1221 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1150	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre for Social Change <small>*Satisfies the State of Missouri government requirement.</small>	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.					
HIST 108 or HIST 109* or GEOG 101 or PHIL 101 or POLS 101* or PSY 101 or ECON 102 or ECON 101 or Foreign Language	World Civilization Before 1500 or World Civilization After 1500* or World Regional Geography or Intro to Philosophy or American/National Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 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 American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	6
<i>No free electives applied to the degree.</i>		0	Maximum Free Electives		0
Group 2 Major Requirements		25	Group 2 Major Requirements		26
Group 1 Core Requirements		31	Group 1 Core Requirements		26
Total Hours		56	Total Hours*		52
<small>*S&T advisor permission is required to transfer more than 68 credits toward the S&T Mining Engineering degree.</small>					

Nuclear Engineering Group 2 Major Requirements

State Fair Community College		Semester	Missouri S&T			
ENGL 102 or COM 101	English Composition II or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small>	3	
CHEM 123	General Chemistry I with Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5	
PHYS 235	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	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.						
LIT 109 or LIT 107 or LIT 112 or HIST 101* or HIST 102* or ART 101 or MUS 101 or THEA 107	British Literature or American Literature or World Literature or US History Before 1877* or US History Since 1877* or Art Appreciation or Music Appreciation or Intro to Theatre <small>*Satisfies the State of Missouri government requirement.</small>	6	ENGLISH 1211 or ENGLISH 1221 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1150	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre for Social Change <small>*Satisfies the State of Missouri government requirement.</small>	6	
Behavioral and Social Sciences						
Select 6 hours from at least two specific disciplines to include at least one of ECON 1100 or 1200.						
ECON 102 or ECON 101	Principles of Microeconomics or Principles of Macroeconomics	3	ECON 1100 or ECON 1200	Principles of Microeconomics or Principles of Macroeconomics	3	
HIST 108 or HIST 109* or GEOG 101 or PHL 101 or POLS 101* or PSY 101 or Foreign Language	World Civilization Before 1500 or World Civilization After 1500* or World Regional Geography or Intro to Philosophy or American/National Government* or General Psychology or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	3	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 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 American Government* or General Psychology or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	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		25	Group 2 Major Requirements		26	
Group 1 Core Requirements		31	Group 1 Core Requirements		26	
Total Hours		56			Total Hours*	52
<small>*S&T advisor permission is required to transfer more than 69 credits toward the S&T Nuclear Engineering degree.</small>						

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Petroleum Engineering Group 2 Major Requirements

State Fair Community College		Semester	Missouri S&T			
ENGL 102 or COM 101	English Composition II or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small>	3	
CHEM 123	General Chemistry I with Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5	
CIS 120 or CIS155	Programming in Python or Programming in C#	3	COMP SCI 1500	Computational Problem Solving	3	
EASC 118	Environmental Geology	3	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3	
PHYS 235	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	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.						
LIT 109 or LIT 107 or LIT 112 or HIST 101* or HIST 102* or ART 101 or MUS 101 or THEA 107	British Literature or American Literature or World Literature or US History Before 1877* or US History Since 1877* or Art Appreciation or Music Appreciation or Intro to Theatre <small>*Satisfies the State of Missouri government requirement.</small>	6	ENGLISH 1211 or ENGLISH 1221 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1150	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre for Social Change <small>*Satisfies the State of Missouri government requirement.</small>	6	
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.						
HIST 108 or HIST 109* or GEOG 101 or PHIL 101 or POLS 101* or PSY 101 or ECON 102 or ECON 101 or Foreign Language	World Civilization Before 1500 or World Civilization After 1500* or World Regional Geography or Intro to Philosophy or American/National Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 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 American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	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		32	
Group 1 Core Requirements		31	Group 1 Core Requirements		26	
Total Hours		62			Total Hours*	58
<small>*S&T advisor permission is required to transfer more than 69 credits toward the S&T Petroleum Engineering degree.</small>						