

Jefferson College — Missouri S&T

General Engineering Transfer Guide

Effective as of Fall 2020

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

Group 1 - Core Requirements: All Majors Take All Courses

Engineering students take all Group 1 - Core Requirements and Group 2 - Major Requirements for major of choice. Math prerequisites: While they are not part of Missouri S&T engineering degree requirements, algebra and trigonometry skills are critical to success in calculus. To prepare for entry into calculus, students should follow math placement testing and advising recommendations at their college.

<u>Jefferson College</u>			<u>Semester</u>	<u>Missouri S&T</u>			
MTH 180	Calculus I	5		MATH 1214	Calculus for Engineers I	4	
MTH 185	Calculus II	5		MATH 1215	Calculus for Engineers II	4	
MTH 201	Calculus III	5		MATH 2222	Calculus with Analytic Geometry III	4	
MTH 205	Differential Equations	3		MATH 3304	Elementary Differential Equations	3	
PHY 223	General Physics I	4		PHYSICS 1135	Engineering Physics I	4	
PHY 224	General Physics II	4		PHYSICS 2135	Engineering Physics II	4	
CHM 111	General Chemistry I	5		CHEM 1310, 1319	General Chemistry I and Lab	5	
ENG 101	English Composition I	3		ENGLISH 1120	Exposition and Argumentation	3	
ECO 102 or ECO 101	Microeconomics or Macroeconomics	3		ECON 1100 or ECON 1200	Principles of Microeconomics or Principles of Macroeconomics	3	
Total Hours			37	Total Hours			34

Group 2 - Major Requirements: Take All Courses for Major of Choice

Engineering students take all Group 1 - Core Requirements (above) and Group 2 - Major Requirements for chosen major from list below. See course requirements on following pages.

Aerospace Engineering
Architectural Engineering
Ceramic Engineering
Chemical Engineering
**Chemical Engineering/Biochemistry
Emphasis**
Civil Engineering
Computer Engineering
Electrical Engineering

Engineering Management
Environmental Engineering
Geological Engineering
Mechanical Engineering
Metallurgical Engineering
Mining Engineering
Nuclear Engineering
Petroleum Engineering

Engineering Major Requirements are detailed on the following pages.

Free Electives: Some programs allow Free Electives as indicated within each major. Free Electives should be selected in consultation with your advisor and may not include remedial/deficiency courses, algebra, trigonometry, pre-calculus, or extra credits in required courses.

Humanities/Social Science (HSS) Electives: HSS electives may include any history, economics, political science, sociology, psychology, philosophy, fine art, literature, or foreign language. Missouri S&T approved HSS courses are listed at ugs.mst.edu. Your campus may have additional acceptable options. Consult with your advisor or email transfer@mst.edu with questions.

Aerospace Engineering Group 2 Major Requirements

<u>Jefferson College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
EGR 101	Computer Aided Engineering Design	4	MECH ENG 1720	Engineering Design with Computer Appl	3
HIST 102 or HIST 103 or HIST 104 or PSC 102	Renaissance to Early Modern Europe or US History I or US History II or US and Missouri Govt. and Constitution	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government	3
ENG 102 or COM 110	Composition and Rhetoric II or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
CIS 155	Intro to Computer Programming	3	CS 1971, 1981	Intro to Programming Methodology and Lab (C++)	3
EGR 261	Circuit Analysis I	3	EE 2800	Circuit Analysis I	3
EGR 228	Engineering Mechanics - Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 250	Engineering Mechanics - Dynamics	3	AERO ENG 2360	Dynamics	3
MTH 172	Linear Algebra	3	MATH 3108	Linear Algebra I <small>(Will satisfy the Advanced Math/Comp Sci elective requirement.)</small>	3
ENG 130 or ENG 175 or ENG 215	English Life and Literature I or American Literature I or World Literature before 1650 <small>(or other literature elective)</small>	3	ENGLISH 1211 or ENGLISH 1221 or ENGLISH 1231	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or World Literature I <small>(or other literature elective)</small>	3
	<i>See your advisor for course options.</i>	3		Ethics Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	31		Group 2 Major Requirements	30
	Group 1 Core Requirements	37		Group 1 Core Requirements	34
	Total Hours	68		Total Hours*	64

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

Architectural Engineering Group 2 Major Requirements

<u>Jefferson College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
EGR 101	Computer Aided Engineering Design	4	MECH ENG 1720	Engineering Design with Computer Appl	3
HST 102 or HST 103 or HST 104	Renaissance to Early Modern Europe or US History I or US History II	3	HISTORY 1200* <small>(or HISTORY 1300 or HISTORY 1310)</small>	Modern Western Civilization* <small>(or American History to 1877 or American History since 1877)</small>	3
				<small>*HISTORY 1200 is preferred; 1300 or 1310 will also be accepted.</small>	
EGR 228	Engineering Mechanics - Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 150	Engineering Mechanics - Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
ADT 151	Surveying I	4	CIV ENG 2401	Fundamentals of Surveying	3
ENG 102 or COM 110 or HSS Elective	Composition and Rhetoric II or Public Speaking or Humanities/Social Science Elective: history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language	3	ENGLISH 1160 or SPMS 1185 or HSS Elective	Writing and Research or Public Speaking or Humanities/Social Science Elective: history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language	3
PHY 105	Physical Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	24		Group 2 Major Requirements	21
	Group 1 Core Requirements	37		Group 1 Core Requirements	34
	Total Hours	61		Total Hours*	55

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

Ceramic Engineering Group 2 Major Requirements

<u>Jefferson College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
EGR 101	Computer Aided Engineering Design	4	MECH ENG 1720	Engineering Design with Computer Appl	3
HIST 102 or HIST 103 or HIST 104 or PSC 102	Renaissance to Early Modern Europe or US History I or US History II or US and Missouri Govt. and Constitution	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government	3
EGN 228	Engineering Mechanics - Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
CHM 200	Organic Chemistry I	5	CHEM 2210/2219	Organic Chemistry I and Lab (Not a specific requirement. Will satisfy technical elective requirement.)	5
CHM 112	General Chemistry II	5	CHEM 1320, 1510*	General Chemistry II (3) and Lab (2)* *Note: CHEM 1510 is not an S&T degree requirement. Will transfer as free elective.	3
ENG 102 or COM 110 or HSS Elective	Composition and Rhetoric II or Public Speaking or Humanities/Social Science Elective: history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language	3	ENGLISH 1160 or SPMS 1185 or HSS Elective	Writing and Research or Public Speaking or Humanities/Social Science Elective: history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language	3
	<i>See your advisor for course options.</i>	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	26		Group 2 Major Requirements	23
	Group 1 Core Requirements	37		Group 1 Core Requirements	34
	Total Hours	63		Total Hours*	57

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

Chemical Engineering Group 2 Major Requirements

<u>Jefferson College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
EGR 101	Computer Aided Engineering Design	4	MECH ENG 1720	Engineering Design with Computer Appl	3
ENH 102	English Composition II	3	ENGLISH 1160	Writing and Research	3
HIST 102 or HIST 103 or HIST 104 or PSC 102	Renaissance to Early Modern Europe or US History I or US History II or US and Missouri Govt. and Constitution	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government	3
CHM 112	General Chemistry II	5	CHEM 1320, 1510*	General Chemistry II (3) and Lab (2)* *Note: CHEM 1510 is not an S&T degree requirement. Will transfer as free elective.	3
CHM 200	Organic Chemistry I	5	CHEM 2210	Organic Chemistry I	3
CHM 201	Organic Chemistry II	5	CHEM 2220	Organic Chemistry II (Will satisfy science elective requirement.)	3
CIS 155	Intro to Computer Programming	3	CS 1971,1981	Intro to Programming Methodology and Lab	3
COM 110	Public Speaking	3	SP&MS 1185	Principles of Speech	3
	<i>See your advisor for course options.</i>	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	34		Group 2 Major Requirements	27
	Group 1 Core Requirements	37		Group 1 Core Requirements	34
	Total Hours	71		Total Hours*	61

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

Chemical Engineering - Biochemical Engineering Emphasis Group 2 Major Requirements

<u>Jefferson College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
EGR 101	Computer Aided Engineering Design	4	MECH ENG 1720	Engineering Design with Computer Appl	3
ENH 102	English Composition II	3	ENGLISH 1160	Writing and Research	3
HIST 102 or HIST 103 or HIST 104 or PSC 102	Renaissance to Early Modern Europe or US History I or US History II or US and Missouri Govt. and Constitution	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government	3
CHM 112	General Chemistry II	5	CHEM 1320, 1510*	General Chemistry II (3) and Lab (2)* <small>*Note: CHEM 1510 is not an S&T degree requirement. Will transfer as free elective.</small>	3
CHM 200	Organic Chemistry I	5	CHEM 2210	Organic Chemistry I	3
CHM 201	Organic Chemistry II	5	CHEM 2220	Organic Chemistry II (Will satisfy science elective requirement.)	3
CIS 155	Intro to Computer Programming	3	CS 1971,1981	Intro to Programming Methodology and Lab	3
COM 110	Public Speaking	3	SP&MS 1185	Principles of Speech	3
	<i>See your advisor for course options.</i>	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	34		Group 2 Major Requirements	27
	Group 1 Core Requirements	37		Group 1 Core Requirements	34
	Total Hours	71		Total Hours*	61

*S&T advisor permission is required to transfer more than 71 credits toward the S&T Chemical/Biochemical Engineering degree.

Civil Engineering Group 2 Major Requirements

<u>Jefferson College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
EGR 101	Computer Aided Engineering Design	4	MECH ENG 1720	Engineering Design with Computer Appl	3
ENG 102 or COM 110	English Composition II or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Public Speaking	3
HIST 102 or HIST 103 or HIST 104 or PSC 102	Renaissance to Early Modern Europe or US History I or US History II or US and Missouri Govt. and Constitution	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government	3
PHY 105	Physical Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
EGR 228	Engineering Mechanics - Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 150	Engineering Mechanics - Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
ADT 151	Surveying I	4	CIV ENG 2401	Fundamentals of Surveying	3
	<i>See your advisor for course options.</i>	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	27		Group 2 Major Requirements	24
	Group 1 Core Requirements	37		Group 1 Core Requirements	34
	Total Hours	64		Total Hours*	58

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

Computer Engineering Group 2 Major Requirements

<u>Jefferson College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
COM 110	Public Speaking	3	SPMS 1185	Public Speaking	3
ENH 102	English Composition II	3	ENGLISH 1160	Writing and Research	3
HIST 102 or HIST 103 or HIST 104 or	Renaissance to Early Modern Europe or US History I or US History II or	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or	American History to 1877 or American History since 1877 or Modern Western Civilization or	3
PSC 102	US and Missouri Govt. and Constitution		POL SCI 1200	American Government	
CIS 155	Intro to Computer Programming	3	CS 1971,1981	Intro to Programming Methodology and Lab	3
EGN 228 and EGN 150 (BOTH of the courses above or ONE course below.)	Engineering Mechanics - Statics (3) and Engineering Mechanincs - Dynamics (3) (Both courses above combined or the following courses will satisfy a required engineering science elective.)	3-6	CIV ENG 2200 and MECH ENG 2350 (BOTH of the courses above or ONE course below.)	Engineering Mechanics-Statics (3) and Engineering Mechanics-Dynamics (3) (Both courses above combined or the following course will satisfy a required engineering science elective.)	3-6
OR			OR		
BIO 201	Genetics		BIO SCI 2223	General Genetics (3)	
EGR 261	Circuit Analysis I	3	EE 2100**	Circuits I **A passing grade on the Missouri S&T EE Advancement Exam I is required to receive credit for EE 2100.	3
MTH 172	Linear Algebra	3	MATH 3108	Linear Algebra (Will satisfy a required math elective.)	3
	<i>See your advisor for course options.</i>	3		Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>	3		Maximum Free Electives	3
	Group 2 Major Requirements	27		Group 2 Major Requirements	24
	Group 1 Core Requirements	37		Group 1 Core Requirements	34
	Total Hours	64		Total Hours*	58

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

Electrical Engineering Group 2 Major Requirements

<u>Jefferson College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
EGR 101	Computer Aided Engineering Design	4	MECH ENG 1720	Engineering Design with Computer Appl	3
COM 110	Public Speaking	3	SPMS 1185	Public Speaking	3
ENH 102	English Composition II	3	ENGLISH 1160	Writing and Research	3
HIST 102 or HIST 103 or HIST 104 or	Renaissance to Early Modern Europe or US History I or US History II or	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or	American History to 1877 or American History since 1877 or Modern Western Civilization or	3
PSC 102	US and Missouri Govt. and Constitution		POL SCI 1200	American Government	
EGN 228 and EGN 150 (BOTH of the courses above or ONE course below.)	Engineering Mechanics - Statics (3) and Engineering Mechanincs - Dynamics (3) (Both courses above combined or the following courses will satisfy a required engineering science elective.)	3-6	CIV ENG 2200 and MECH ENG 2350 (BOTH of the courses above or ONE course below.)	Engineering Mechanics-Statics (3) and Engineering Mechanics-Dynamics (3) (Both courses above combined or the following course will satisfy a required engineering science elective.)	3-6
OR			OR		
BIO 201	Genetics		BIO SCI 2223	General Genetics (3)	
EGR 261	Circuit Analysis I	3	EE 2100**	Circuits I **A passing grade on the Missouri S&T EE Advancement Exam I is required to receive credit for EE 2100.	3
MTH 172	Linear Algebra	3	MATH 3108	Linear Algebra	3
	<i>See your advisor for course options.</i>	3		Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>	3		Maximum Free Electives	3
	Group 2 Major Requirements	28		Group 2 Major Requirements	24
	Group 1 Core Requirements	37		Group 1 Core Requirements	34
	Total Hours	65		Total Hours*	58

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

Engineering Management Group 2 Major Requirements

<u>Jefferson College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
EGR 101	Computer Aided Engineering Design	4	MECH ENG 1720	Engineering Design with Computer Appl	3
PSY 101	General Psychology	3	PSYCH 1101	General Psychology	3
HIST 102 or HIST 103 or HIST 104 or PSC 102	Renaissance to Early Modern Europe or US History I or US History II or US and Missouri Govt. and Constitution	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government	3
ENG 102 or COM 110	English Composition II or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Public Speaking	3
CIS 155	Intro to Computer Programming	3	CS 1971, 1981	Intro to Programming Methodology and Lab (C++)	3
EGR 261	Circuit Analysis I	3	EE 2800	Circuit Analysis I	3
EGR 228	Engineering Mechanics - Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
EGN 150	Engineering Mechanics - Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
	<i>See your advisor for course options.</i>	3		Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>	3		Maximum Free Electives	3
	Group 2 Major Requirements	31		Group 2 Major Requirements	30
	Group 1 Core Requirements	37		Group 1 Core Requirements	34
	Total Hours	68		Total Hours*	64

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

Environmental Engineering Group 2 Major Requirements

<u>Jefferson College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
EGR 101	Computer Aided Engineering Design	4	MECH ENG 1720	Engineering Design with Computer Appl	3
ENG 102 or COM 110	English Composition II or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Public Speaking	3
HIST 102 or HIST 103 or HIST 104	Renaissance to Early Modern Europe or US History I or US History II	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200	American History to 1877 or American History since 1877 or Modern Western Civilization	3
PHY 105	Physical Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
CHM 112	General Chemistry II	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2)* <small>*Note: CHEM 1510 is not an S&T degree requirement. Will transfer as free elective.</small>	3
BIO 101	General Biology	5	BIO SCI 1113	General Biology	4
EGR 228	Engineering Mechanics - Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 150	Engineering Mechanics - Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
	<i>See your advisor for course options.</i>	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	33		Group 2 Major Requirements	28
	Group 1 Core Requirements	37		Group 1 Core Requirements	34
	Total Hours	70		Total Hours*	62

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

Geological Engineering Group 2 Major Requirements

<u>Jefferson College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
EGR 101	Computer Aided Engineering Design	4	MECH ENG 1720	Engineering Design with Computer Appl	3
ENG 102 or COM 110	English Composition II or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Public Speaking	3
HIST 102 or HIST 103 or HIST 104 or PSC 102	Renaissance to Early Modern Europe or US History I or US History II or US and Missouri Govt. and Constitution	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government	3
PHY 105	Physical Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
EGR 228	Engineering Mechanics - Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 150	Engineering Mechanics - Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
BIO 101 or CHM 112 or CHM 200	General Biology or General Chemistry II or Organic Chemistry I	3-5	BIO SCI 1113 or CHEM 1320, 1510* or CHEM 2210, 2219*	General Biology (3) or General Chemistry II (3) and Qualitative Analysis* (2) or Organic Chemistry I (4) and Lab* (1) <small>or any 3-hour course in chemistry, geochemistry, or biology. *Note: CHEM 1510 and 2219 are not S&T degree requirements. Will transfer as free electives.</small>	3
	<i>See your advisor for course options.</i>	3		Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	29		Group 2 Major Requirements	21
	Group 1 Core Requirements	37		Group 1 Core Requirements	34
	Total Hours	66		Total Hours*	55

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

Mechanical Engineering Group 2 Major Requirements

<u>Jefferson College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
EGR 101	Computer Aided Engineering Design	4	MECH ENG 1720	Engineering Design with Computer Appl	3
HIST 102 or HIST 103 or HIST 104 or PSC 102	Renaissance to Early Modern Europe or US History I or US History II or US and Missouri Govt. and Constitution	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government	3
ENG 102 or COM 110	English Composition II or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Public Speaking	3
CIS 155	Intro to Computer Programming	3	CS 1971, 1981	Intro to Programming Methodology and Lab (C++)	3
EGR 261	Circuit Analysis I	3	EE 2800	Circuit Analysis I	3
EGR 228	Engineering Mechanics - Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 150	Engineering Mechanics - Dynamics	3	MECH ENG 2360	Dynamics	3
MTH 175	Linear Algebra	3	MATH 3108	Linear Algebra I <small>(Will satisfy the Advanced Math/Comp Sci elective requirement.)</small>	3
MTT 148	Intro to Metallurgy	3	MET ENG 2110	Metallurgy for Engineers	3
ENG 130 or ENG 175 or ENG 215	English Life and Literature I or American Literature I or World Literature before 1650 <small>(or other literature elective)</small>	3	ENGLISH 1211 or ENGLISH 1221 or ENGLISH 1231	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or World Literature I <small>(or other literature elective)</small>	3
	<i>See your advisor for course options.</i>	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	34		Group 2 Major Requirements	33
	Group 1 Core Requirements	37		Group 1 Core Requirements	34
	Total Hours	71		Total Hours*	67

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

Metallurgical Engineering Group 2 Major Requirements

<u>Jefferson College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
EGR 101	Computer Aided Engineering Design	4	MECH ENG 1720	Engineering Design with Computer Appl	3
ENG 102 or COM 110	English Composition II or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Public Speaking	3
HIST 102 or HIST 103 or HIST 104 or PSC 102	Renaissance to Early Modern Europe or US History I or US History II or US and Missouri Govt. and Constitution	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government	3
EGN 228	Engineering Mechanics - Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
MTT 148	Intro to Metallurgy	3	MET ENG 2110	Metallurgy for Engineers	3
CHM 112	General Chemistry II	5	CHEM 1320, 1510*	General Chemistry II (3) and Lab (2)* <small>*Note: CHEM 1510 is not an S&T degree requirement. Will transfer as free elective.</small>	3
CHM 200 or EGR 261	Organic Chemistry I (5) or Circuit Analysis I (4)	4-5	CHEM 2210, 2219* or EE 2800 or	Organic Chemistry I (4) and Lab* (1) or Electrical Circuits (3) <small>Not specifically required for the degree but will satisfy Out-of-Department Technical Elective Requirement. *Note: CHEM 2219 is not a degree requirement; will transfer as elective credit.</small>	3
	<i>See your advisor for course options.</i>	3		Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>	3		Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>	5		Maximum Free Electives	5
	Group 2 Major Requirements	36		Group 2 Major Requirements	32
	Group 1 Core Requirements	37		Group 1 Core Requirements	34
	Total Hours	73		Total Hours*	66

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

Mining Engineering Group 2 Major Requirements

<u>Jefferson College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
EGR 101	Computer Aided Engineering Design	4	MECH ENG 1720	Engineering Design with Computer Appl	3
ENH 102	English Composition II	3	ENGLISH 1160	Writing and Research	3
HIST 102 or HIST 103 or HIST 104 or PSC 102	Renaissance to Early Modern Europe or US History I or US History II or US and Missouri Govt. and Constitution	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government	3
EGN 228	Engineering Mechanics - Statics	3	CIV ENG 2200*	Engineering Mechanics-Statics	3
EGN 150	Engineering Mechanics - Dynamics	3	MECH ENG 2350*	Engineering Mechanics-Dynamics	3
PHY 105	Physical Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
	<i>See your advisor for course options.</i>	3		Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	26		Group 2 Major Requirements	24
	Group 1 Core Requirements	37		Group 1 Core Requirements	34
	Total Hours	63		Total Hours*	58

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

Nuclear Engineering Group 2 Major Requirements

<u>Jefferson College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
EGR 101	Computer Aided Engineering Design	4	MECH ENG 1720	Engineering Design with Computer Appl	3
ENH 102	English Composition II	3	ENGLISH 1160	Writing and Research	3
HIST 102 or HIST 103 or HIST 104 or	Renaissance to Early Modern Europe or US History I or US History II or	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or	American History to 1877 or American History since 1877 or Modern Western Civilization or	3
PSC 102	US and Missouri Govt. and Constitution		POL SCI 1200	American Government	
MTH 175	Linear Algebra	3	MATH 3108	Linear Algebra I	3
EGN 228	Engineering Mechanics - Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
MTT 148	Intro to Metallurgy	3	MET ENG 2110	Metallurgy for Engineers	3
	<i>See your advisor for course options.</i>	3		Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>	3		Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>	6		Maximum Free Electives	6
	Group 2 Major Requirements	31		Group 2 Major Requirements	30
	Group 1 Core Requirements	37		Group 1 Core Requirements	34
	Total Hours	68		Total Hours*	64

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

Petroleum Engineering Group 2 Major Requirements

<u>Jefferson College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
EGR 101	Computer Aided Engineering Design	4	MECH ENG 1720	Engineering Design with Computer Appl	3
ENH 102	English Composition II	3	ENGLISH 1160	Writing and Research	3
HIST 102 or HIST 103 or HIST 104 or	Renaissance to Early Modern Europe or US History I or US History II or	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or	American History to 1877 or American History since 1877 or Modern Western Civilization or	3
PSC 102	US and Missouri Govt. and Constitution		POL SCI 1200	American Government	
PHY 105	Physical Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
EGN 228	Engineering Mechanics - Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
EGN 150	Engineering Mechanics - Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
	<i>See your advisor for course options.</i>	3		Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	3		Maximum Free Electives	0
	Group 2 Major Requirements	29		Group 2 Major Requirements	24
	Group 1 Core Requirements	37		Group 1 Core Requirements	34
	Total Hours	66		Total Hours*	58

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