

General Engineering Transfer Guide

Effective as of Fall 2023

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.

Jefferson College			Semester	Missouri S&T			
MTH 180	Calculus I	5	MATH 1214	Calculus I	Grade of C or better is required.	4	
MTH 185	Calculus II	5	MATH 1215	Calculus II	Grade of C or better is required.	4	
MTH 201	Calculus III	5	MATH 2222	Calculus III	Grade of C or better is required.	4	
MTH 205	Differential Equations	3	MATH 3304	Elementary Differential Equations		3	
PHY 223	General Physics I	4	PHYSICS 1135	Engineering Physics I	Grade of C or better is required.	4	
PHY 224	General Physics II	4	PHYSICS 2135	Engineering Physics II	Grade of C or better is required.	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	Microeconomics or	3	ECON 1100 or	Principles of Microeconomics or		3	
ECO 101	Macroeconomics		ECON 1200	Principles of Macroeconomics			
		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 art, English and technical communication, etymology, foreign language, music, philosophy, speech and media studies, or theatre. Your campus may have additional acceptable options. Consult with your advisor or email transfer@msst.edu with questions. See Missouri S&T online catalog at <https://catalog.msst.edu/undergraduate/degreeprogramsandcourses/> for more information.

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 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
ENG 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 Method 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 or (Will satisfy the Advanced Math/Comp Sci elective requirement.)	3
ENG 130 or ENG 175 or ENG 215	English Life and Literature I or American Literature I or World Literature before 1650 (or other literature elective)	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 (or other literature elective)	3
	Ethics Elective Engineering, business, bio, social or other ethics approved by advisor.	3			Ethics Elective Engineering, business, bio, social or other ethics approved by advisor.	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* (or HISTORY 1300 or HISTORY 1310)	Modern Western Civilization* (or American History to 1877 or American History since 1877) *HISTORY 1200 is preferred; 1300 or 1310 will also be accepted.	3
EGR 228	Engineering Mechanics - Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 250	Engineering Mechanics - Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
ADT 151	Surveying I	4		CIV ENG 2401	Fundamentals of Surveying	3
HSS Elective	Humanities/Social Science Elective: history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language	3		HSS Elective	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	20
	Group 1 Core Requirements	37			Group 1 Core Requirements	34
	Total Hours	61			Total Hours*	54

*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 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
EGR 228	Engineering Mechanics - Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
CHM 200	Organic Chemistry I	5		CHEM 2210/2219	Organic Chemistry I (4) (Will satisfy the advanced chemistry elective requirement.)	5
CHM 112	General Chemistry II	5		CHEM 1320	General Chemistry II	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
	Humanities/Social Science Elective	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 3560	Technical Writing	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 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
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 general credit.	5
CHM 200	Organic Chemistry I	5		CHEM 2210, 2219*	Organic Chemistry I (3) and Lab* (1) *The lab is not required for the degree, will transfer as 1 of 9 hours of required science electives.	4
CHM 201	Organic Chemistry II	5		CHEM 2220, 2229*	Organic Chemistry II (3) and Lab(1) CHEM 2220 will transfer as 3 of 9 hours of required science electives. CHEM 2229 is not required for the degree. Will transfer as general credit.	3
CIS 155	Intro to Computer Programming	3		CS 1500	Computational Problem Solving	3
COM 110	Public Speaking	3		SP&MS 1185	Principles of Speech	3
	Humanities/Social Science Elective	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	30
	Group 1 Core Requirements	37			Group 1 Core Requirements	34
	Total Hours	71			Total Hours*	64

*S&T advisor permission is required to transfer more than 68 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 3560	Technical Writing	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 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
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>	5
CHM 200	Organic Chemistry I	5		CHEM 2210, 2219*	Organic Chemistry I (3) and Lab* (1) <small>*The lab is not required for the degree, will transfer as 1 of 9 hours of required science electives .</small>	4
CHM 201	Organic Chemistry II	5		CHEM 2220, 2229*	Organic Chemistry II (3) and Lab(1) <small>CHEM 2220 will transfer as 3 of 9 hours of required science electives. CHEM 2229 is not required for the degree. Will transfer as general credit.</small>	5
CIS 155	Intro to Computer Programming	3		CS 1500	Computational Problem Solving	3
COM 110	Public Speaking	3		SP&MS 1185	Principles of Speech	3
	Humanities/Social Science Elective	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	32
	Group 1 Core Requirements	37			Group 1 Core Requirements	34
	Total Hours	71			Total Hours*	66

*S&T advisor permission is required to transfer more than 70 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 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
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 250	Engineering Mechanics - Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
ADT 151	Surveying I	4		CIV ENG 2401	Fundamentals of Surveying	3
	Humanities/Social Science Elective	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	23
	Group 1 Core Requirements	37			Group 1 Core Requirements	34
	Total Hours	64			Total Hours*	57

*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 or ENGLISH 3560	Writing and Research or Technical Writing	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 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
CIS 155	Intro to Computer Programming	3		CS 1570, 1580	Intro to Programming and Lab (C++)	4
EGR 228 and EGR 250 or BIO 201 or CHM 200	Engineering Mechanics - Statics (3) or Engineering Mechanincs - Dynamics (3) or Genetics (3) or Organic Chemistry I (5)	3		CIV ENG 2200 or MECH ENG 2350 or BIO SCI 2223 or CHEM 2210, 2219*	Engineering Mechanics-Statics (3) and Engineering Mechanics-Dynamics (3) or General Genetics (3) or Organic Chemistry I (3) and Lab* (1)	3
				*CHEM 2219 is not an S&T degree requirement, will transfer as general credit.		
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 or (Will satisfy a required math elective.)	3
	Humanities/Social Science Elective	3			Humanities/Social Science Elective	3
	Maximum Free Electives	3			Maximum Free Electives	3
	Group 2 Major Requirements	27			Group 2 Major Requirements	28
	Group 1 Core Requirements	37			Group 1 Core Requirements	34
Total Hours			64	Total Hours*		
				62		

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

Electrical Engineering Group 2 Major Requirements

Jefferson College			Semester	Missouri S&T		
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	Renaissance to Early Modern Europe or			HISTORY 1200 or	Modern Western Civilization or	
HIST 103 or	US History I or	3		HISTORY 1300 or	American History to 1877 or	3
HIST 104 or	US History II or			HISTORY 1310 or	American History since 1877 or	
PSC 102	US and Missouri Govt. and Constitution			POL SCI 1200	American Government	
EGR 228 and	Engineering Mechanics - Statics (3) and			CIV ENG 2200 and	Engineering Mechanics-Statics (3) and	
EGR 250	Engineering Mechanincs - Dynamics (3)			MECH ENG 2350	Engineering Mechanics-Dynamics (2)	
(BOTH of the courses above or	(Both courses above combined or the following courses will satisfy a			(BOTH of the courses above or	(Both courses above combined or any one of the following courses will satisfy	
ONE course below.)	required engineering science elective.)			(ONE of the courses below.)	a required engineering science elective.)	
OR	OR	3		OR	OR	3
BIO 201 or	Genetics (4) or			BIO SCI 2223 or	General Genetics (3) or	
CHM 200	Organic Chemistry I (5)			CHEM 2210, 2219*	Organic Chemistry I (3) and Lab* (1)	
					*CHEM 2219 is not an S&T degree requirement, will transfer as general credit.	
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
	Humanities/Social Science Elective	3			Humanities/Social Science Elective	3
	Maximum Free Electives	3			Maximum Free Electives	3
	Group 2 Major Requirements	28			Group 2 Major Requirements	27
	Group 1 Core Requirements	37			Group 1 Core Requirements	34
	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

Jefferson College			Semester	Missouri S&T		
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	Renaissance to Early Modern Europe or	3	HISTORY 1200 or	Modern Western Civilization or	3	
HIST 103 or	US History I or					
HIST 104 or	US History II or					
PSC 102	US and Missouri Govt. and Constitution					
COM 110	Public Speaking	3	POL SCI 1200	American Government		
ENG 102	English Composition II	3	SPMS 1185	Principles of Speech	3	
CIS 155	Intro to Computer Programming	3	ENGLISH 1160	Writing and Research	3	
EGR 261	Circuit Analysis I	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3	
EGR 228	Engineering Mechanics - Statics	3	EE 2800	Circuit Analysis I	3	
EGR 250	Engineering Mechanics - Dynamics	3	CIV ENG 2200	Engineering Mechanics-Statics	3	
	Humanities/Social Science Elective	3	MECH ENG 2350	Engineering Mechanics-Dynamics	2	
	Maximum Free Electives	3		Humanities/Social Science Elective	3	
	Group 2 Major Requirements	34		Maximum Free Electives	3	
	Group 1 Core Requirements	37		Group 2 Major Requirements	32	
				Group 1 Core Requirements	34	
	Total Hours	71			Total Hours*	66
*S&T advisor permission is required to transfer more than 68 credits toward the S&T Engineering Management degree.						

*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 1200 or HISTORY 1300 or HISTORY 1310	Modern Western Civilization or American History to 1877 or American History since 1877	3	
PHY 105	Physical Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3	
CHM 112	General Chemistry II	5	CHEM 1320	General Chemistry II	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 250	Engineering Mechanics - Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	2	
	Humanities/Social Science Elective	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	27	
	Group 1 Core Requirements	37		Group 1 Core Requirements	34	
	Total Hours	70		Total Hours*	61	
			*S&T advisor permission is required to transfer more than 69 credits toward the S&T Environmental Engineering degree.			

*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	English Composition II	3		ENGLISH 3560	Technical Writing	3
HIST 102 or	Renaissance to Early Modern Europe or			HISTORY 1200 or	Modern Western Civilization or	
HIST 103 or	US History I or			HISTORY 1300 or	American History to 1877 or	
HIST 104 or	US History II or	3		HISTORY 1310 or	American History since 1877 or	3
PSC 102	US and Missouri Govt. and Constitution			POL SCI 1200	American Government	
PHY 105	Physical Geology	4		GEO ENG 1150 (GEOLOGY 1110)	Physical and Environmental Geology	3
EGR 228	Engineering Mechanics - Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 250	Engineering Mechanics - Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
BIO 101 or	General Biology or			BIO SCI 1113 or	General Biology or	
CHM 112 or	General Chemistry II or			CHEM 1320 or	General Chemistry II or	
CHM 200	Organic Chemistry I	3		CHEM 2210	Organic Chemistry I	3
					or any 3-hour course in chemistry, geochemistry, or biology. Satisfies chemistry/geochemistry elective requirement.	
	Humanities/Social Science Elective	3			Humanities/Social Science Elective	3
	Humanities/Social Science Elective	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	26
	Group 1 Core Requirements	37			Group 1 Core Requirements	34
	Total Hours	66			Total Hours*	60

*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	Renaissance to Early Modern Europe or			HISTORY 1200 or	Modern Western Civilization or	
HIST 103 or	US History I or			HISTORY 1300 or	American History to 1877 or	
HIST 104 or	US History II or	3		HISTORY 1310 or	American History since 1877 or	3
PSC 102	US and Missouri Govt. and Constitution			POL SCI 1200	American Government	
ENG 102 or	English Composition II or			ENGLISH 1160 or	Writing and Research or	
COM 110	Public Speaking	3		SPMS 1185	Principles of Speech	3
CIS 155	Intro to Computer Programming	3		CS 1971, 1981	Intro to Programming Method 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		MECH ENG 2360	Dynamics	3
MTH 175	Linear Algebra	3		MATH 3108	Linear Algebra I or (Will satisfy the Advanced Math/Computer Science elective requirement.)	3
MTT 148	Intro to Metallurgy	3		MET ENG 2110	Metallurgy for Engineers	3
ENG 130 or	English Life and Literature I or			ENGLISH 1211 or	British Literature I: The Beginnings to 1800 or	
ENG 175 or	American Literature I or			ENGLISH 1221 or	American Literature: 1600 to 1865 or	
ENG 215	World Literature before 1650 (or other literature elective)	3		ENGLISH 1231	World Literature I (or other literature elective)	3
	Humanities/Social Science Elective	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 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
EGR 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	General Chemistry II	3
CHM 200 or EGR 261	Organic Chemistry I (5) or Circuit Analysis I (4)	4		CHEM 2210, 2219 or EE 2800	Organic Chemistry I (4) or Electrical Circuits (3) or <i>Not specifically required for the degree but will satisfy Out-of-Department Technical Elective Requirement.</i>	3
					<i>*Note: CHEM 2219 is not a degree requirement</i>	
	Humanities/Social Science Elective	3			Humanities/Social Science Elective	3
	Humanities/Social Science Elective	3			Humanities/Social Science Elective	3
	Maximum Free Electives	5			Maximum Free Electives	3
	Group 2 Major Requirements	36			Group 2 Major Requirements	30
	Group 1 Core Requirements	37			Group 1 Core Requirements	34
	Total Hours	73			Total Hours*	64
				*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 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
EGR 228	Engineering Mechanics - Statics	3		CIV ENG 2200*	Engineering Mechanics-Statics	3
EGR 250	Engineering Mechanics - Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
PHY 105	Physical Geology	4		GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
	Humanities/Social Science Elective	3			Humanities/Social Science Elective	3
	Humanities/Social Science Elective	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 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
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 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
CIS 155	Intro to Computer Programming	3		CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
MTH 175	Linear Algebra	3		MATH 3108	Linear Algebra	3
EGR 228	Engineering Mechanics - Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 261	Circuit Analysis I	3		EE 2800	Circuit Analysis I	3
MTT 148	Intro to Metallurgy	3		MET ENG 2110	Metallurgy for Engineers	3
	Humanities/Social Science Elective	3			Humanities/Social Science Elective	3
	Humanities/Social Science Elective	3			Humanities/Social Science Elective	3
	Maximum Free Electives	6			Maximum Free Electives	6
	Group 2 Major Requirements	37			Group 2 Major Requirements	36
	Group 1 Core Requirements	37			Group 1 Core Requirements	34
	Total Hours	74			Total Hours*	70

*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 PSC 102	Renaissance to Early Modern Europe or US History I or US History II or US and Missouri Govt. and Constitution	3		HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
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 250	Engineering Mechanics - Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
	Humanities/Social Science Elective	3			Humanities/Social Science Elective	3
	Humanities/Social Science Elective	3			Humanities/Social Science Elective	3
	No free electives applied to the degree.	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 69 credits toward the S&T Petroleum Engineering degree.