

Morehouse 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.

Morehouse College		Semester	Missouri S&T		
MTH 161 or MTH 251	Calculus I or Analysis I	4	MATH 1214	Calculus for Engineers I Grade of C or better is required.	4
MTH 162* or MTH 252	Calculus II or Analysis II	4	MATH 1215*	Calculus for Engineers II Grade of C or better is required.	4
MTH 263* or MTH 365	Calculus III or Analysis III	4	MATH 2222*	Calculus with Analytic Geometry III Grade of C or better is required.	4
<small>*MTH 162 and MTH 263 must be taken in combination to receive credit for both S&T MATH 1215 and 2222. All other calculus courses will transfer individually as listed.</small>			<small>*MTH 162 and MTH 263 must be taken in combination to receive credit for both S&T MATH 1215 and 2222. All other calculus courses will transfer individually as listed.</small>		
MTH 321 or MTH 365	Intro to Ordinary Differential Equations or Differential Equations	3	MATH 3304	Elementary Differential Equations	3
PHY 154	Mechanics	4	PHYSICS 1135	Engineering Physics I Grade of C or better is required.	4
PHY 253	Electricity and Magnetism	4	PHYSICS 2135	Engineering Physics II Grade of C or better is required.	4
CHE 111, 111L	Elementary Inorganic Chemistry I and Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5
EGR 101** and EGR 103**	Freshmann Engineering Design (3) and Engineering Graphics (3)	6	FR ENG 1100 and MECH ENG 1720**	StudyCareers in Engineering and Computing (1) and Engineering Design with Computer Applications (3)	4
<small>**EGR 101 and 103 must be taken in combination to receive credit for both S&T FR ENG 1100 and MECH ENG 1720. MECH ENG 1720 is not an S&T degree requirement for Computer Engineering majors.</small>			<small>**EGR 101 and 103 must be taken in combination to receive credit for both S&T FR ENG 1100 and MECH ENG 1720. MECH ENG 1720 is not an S&T degree requirement for Computer Engineering majors.</small>		
ENG 101 or ENG 103	English Composition I or English Composition III	3	ENGLISH 1120	Exposition and Argumentation	3
ECO 202 or ECO 201	Principles of Microeconomics or Principles of Macroeconomics	3	ECON 1100 or ECON 1200	Principles of Microeconomics or Principles of Macroeconomics	3
Total Hours 39			Total Hours 38		

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					
Morehouse College		Semester	Missouri S&T		
HIS 215 or HIS 216 or HIS 112 or PSC 251	History of the United States to 1876 or History of the United States Since 1876 or World History: Topical Approaches or National Government	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 ENG 393 or ENG 350 or ENG 351	Composition or Business and Professional Writing or Principles of Speech Communication or Professional Communication	3	ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech	3
CSC 110 or CSC 160	Computer Programming I or Computer Programming II	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
EGR 205	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 206	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
MTH 271 or MTH 341	Intro to Linear Algebra or Probability and Statistics I	3	MATH 3108 or STAT 3115	Linear Algebra I or Engineering Statistics <small>(Will satisfy the Advanced Math/Comp Sci elective requirement.)</small>	3
	Literature Elective	3		Literature Elective	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	24		Group 2 Major Requirements	24
	Group 1 Core Requirements	39		Group 1 Core Requirements	38
	Total Hours	63		Total Hours*	62

*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					
Morehouse College		Semester	Missouri S&T		
HIS 112 (or HIS 215 or HIS 216)	World History: Topical Approaches (or History of the United States to 1876 or History of the United States since 1876) <small>*HISTORY 112 is preferred; 215 or 216 will also be accepted.</small>	3	HISTORY 1200* (or HISTORY 1300 or HISTORY 1310)	Modern Western Civilization* (or American History to 1877 or American History since 1877) <small>*HISTORY 1200 is preferred; 1300 or 1310 will also be accepted.</small>	3
EGR 205	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 308	Engineering Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
EGR 206	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
MTH 341	Probability and Statistics I	3	STAT 3115	Engineering Statistics <small>(Will be substituted for STAT 3113.)</small>	3
ENG 102 or ENG 350 or ENG 351 or HSS Elective	Composition or Principles of Speech Communication or Professional Communication 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>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	18		Group 2 Major Requirements	18
	Group 1 Core Requirements	39		Group 1 Core Requirements	38
	Total Hours	57		Total Hours*	56

*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>Morehouse College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
HIS 215 or HIS 216 or HIS 112 or PSC 251	History of the United States to 1876 or History of the United States Since 1876 or World History: Topical Approaches or National Government	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
EGR 205	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 206	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
CHE 231 or CHE 321	Elementary Organic Chemistry I (4) or Elementary Physical Chemistry (3)	3-4	CHEM 2210 or CHEM 3410	Organic Chemistry I (4) or Chemical Thermodynamics I (3) (Not a specific requirement. Will satisfy the advanced chemistry elective requirement.)	3-4
CHE 112	Elementary Inorganic Chemistry II	3	CHEM 1320	General Chemistry II	3
MTH 341	Probability and Statistics I	3	STAT 3115	Engineering Statistics (or any statistics course 3000-level or higher. Satisfies statistics elective requirement.)	3
PHY 254	Optics and Modern Physics	3	PHYS 2305	Intro to Modern Physics	3
ENG 102 or ENG 350 or ENG 351 or HSS Elective	Composition or Principles of Speech Communication or Professional Communication 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
	See your advisor for course options.	3		Humanities/Social Science Elective	3
	No free electives applied to the degree.	0		Maximum Free Electives	0
	Group 2 Major Requirements	27		Group 2 Major Requirements	27
	Group 1 Core Requirements	39		Group 1 Core Requirements	38
	Total Hours	66		Total Hours*	65

*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>Morehouse College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
ENG 102 or ENG 393	Composition or Business and Professional Writing	3	ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing	3
HIS 215 or HIS 216 or HIS 112 or PSC 251	History of the United States to 1876 or History of the United States Since 1876 or World History: Topical Approaches or National Government	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
CHE 112	Elementary Inorganic Chemistry II	3	CHEM 1320	General Chemistry II	3
CHE 231	Elementary organic Chemistry I	4	CHEM 2210, 2219	Organic Chemistry I and Lab	5
CHE 232	Elementary Organic Chemistry I	4	CHEM 2220	Organic Chemistry I (4) (Will satisfy science elective requirement.)	4
MATH 280 or CSC 110 or CSC 160	Discrete Math or Computer Programming I or Computer Programming II	3	CS 1500 or CS 1971, 1981	Computational Problem Solving (3) or Intro to Programming Method and Lab (C++)	3
MTH 341	Probability and Statistics I	3	STAT 3115	Engineering Statistics (Will be substituted for STAT 3113.)	3
ENG 350 or ENG 351	Principles of Speech Communication or Professional Communication	3	SP&MS 1185	Principles of Speech	3
	See your advisor for course options.	3		Humanities/Social Science Elective	3
	No free electives applied to the degree.	0		Maximum Free Electives	0
	Group 2 Major Requirements	29		Group 2 Major Requirements	30
	Group 1 Core Requirements	39		Group 1 Core Requirements	38
	Total Hours	68		Total Hours*	68

*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>Morehouse College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
ENG 102 or ENG 393	Composition or Business and Professional Writing	3	ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing	3
HIS 215 or HIS 216 or HIS 112 or PSC 251	History of the United States to 1876 or History of the United States Since 1876 or World History: Topical Approaches or National Government	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
CHE 112	Elementary Inorganic Chemistry II	3	CHEM 1320	General Chemistry II	3
CHE 231	Elementary organic Chemistry I	4	CHEM 2210, 2219	Organic Chemistry I and Lab	5
CHE 232	Elementary Organic Chemistry I	4	CHEM 2220	Organic Chemistry I (4) (Will satisfy science elective requirement.)	4
MATH 280 or CSC 110 or CSC 160	Discrete Math or Computer Programming I or Computer Programming II	3	CS 1500 or CS 1971, 1981	Computational Problem Solving (3) or Intro to Programming Method and Lab (C++)	3
MTH 341	Probability and Statistics I	3	STAT 3115	Engineering Statistics (Will be substituted for STAT 3113.)	3
ENG 350 or ENG 351	Principles of Speech Communication or Professional Communication	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	29		Group 2 Major Requirements	30
	Group 1 Core Requirements	39		Group 1 Core Requirements	38
	Total Hours	68		Total Hours*	68

*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>Morehouse College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
ENG 102 or ENG 393 or ENG 350 or ENG 351	Composition or Business and Professional Writing or Principles of Speech Communication or Professional Communication	3	ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech	3
HIS 215 or HIS 216 or HIS 112 or PSC 251	History of the United States to 1876 or History of the United States Since 1876 or World History: Topical Approaches or National Government	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
EGR 205	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 308	Engineering Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
EGR 206	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
MTH 341	Probability and Statistics I	3	STAT 3115	Engineering Statistics (Will be substituted for STAT 3113.)	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	21		Group 2 Major Requirements	21
	Group 1 Core Requirements	39		Group 1 Core Requirements	38
	Total Hours	60		Total Hours*	59

*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					
Morehouse College		Semester	Missouri S&T		
ENG 350 or ENG 351	Principles of Speech Communication or Professional Communication	3	SPMS 1185	Public Speaking	3
ENG 102 or ENG 393	Composition or Business and Professional Writing	3	ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing	3
HIS 215 or HIS 216 or HIS 112 or PSC 251	History of the United States to 1876 or History of the United States Since 1876 or World History: Topical Approaches or National Government	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
CSC 285 or MTH 211	Discrete Structures or Intro to Discrete Mathematics	3	CS 1200	Discrete Math for Computer Science	3
MATH 280 or CSC 110 or CSC 160	Discrete Math or Computer Programming I or Computer Programming II	3	CS 1500 or CS 1971, 1981	Computational Problem Solving (3) or Intro to Programming Method and Lab (C++)	3
EGR 205 and EGR 308 (BOTH of the courses above or the course below.) OR CHE 231	Engineering Statics (3) and Engineering Dynamics (3) (Both courses above combined or the one course below will satisfy a required engineering science elective.) OR Elementary Organic Chemistry I (4)	4-6	CIV ENG 2200 and MECH ENG 2350 (BOTH of the courses above or the course below.) OR CHEM 2210	Engineering Mechanics-Statics (3) and Engineering Mechanics-Dynamics (3) (Both courses above combined or the one course below will satisfy a required engineering science elective.) OR Organic Chemistry I (4)	4-6
MTH 271 or MTH 272 or MTH 255	Intro to Linear Algebra or Linear Algebra or Intro to Set Theory	3	MATH 3108 or MATH 3109	Linear Algebra or Foundations of Mathematics (Will satisfy a required math elective.)	3
MTH 341	Probability and Statistics I	3	STAT 3115	Engineering Statistics (Will be substituted for STAT 3117.)	3
	See your advisor for course options.	3		Humanities/Social Science Elective	3
	See your advisor for course options.	3		Maximum Free Electives	3
	Group 2 Major Requirements	31		Group 2 Major Requirements	31
	Group 1 Core Requirements	39		Group 1 Core Requirements	38
	Total Hours	70		Total Hours*	69

*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					
Morehouse College		Semester	Missouri S&T		
ENG 350 or ENG 351	Principles of Speech Communication or Professional Communication	3	SPMS 1185	Public Speaking	3
ENG 102 or ENG 393	Composition or Business and Professional Writing	3	ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing	3
HIS 215 or HIS 216 or HIS 112 or PSC 251	History of the United States to 1876 or History of the United States Since 1876 or World History: Topical Approaches or National Government	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
EGR 205 and EGR 308 (BOTH of the courses above or the course below.) OR CHE 231	Engineering Statics (3) and Engineering Dynamics (3) (Both courses above combined or the one course below will satisfy a required engineering science elective.) OR Elementary Organic Chemistry I (4)	4-6	CIV ENG 2200 and MECH ENG 2350 (BOTH of the courses above or the course below.) OR CHEM 2210	Engineering Mechanics-Statics (3) and Engineering Mechanics-Dynamics (3) (Both courses above combined or the one course below will satisfy a required engineering science elective.) OR Organic Chemistry I (4)	4-6
MTH 271	Intro to Linear Algebra	3	MATH 3108	Linear Algebra	3
MTH 341	Probability and Statistics I	3	STAT 3115	Engineering Statistics (Will be substituted for STAT 3117.)	3
	See your advisor for course options.	3		Humanities/Social Science Elective	3
	See your advisor for course options.	3		Maximum Free Electives	3
	Group 2 Major Requirements	25		Group 2 Major Requirements	25
	Group 1 Core Requirements	39		Group 1 Core Requirements	38
	Total Hours	64		Total Hours*	63

*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>Morehouse College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
PSY 101	Intro to Psychology	3	PSYCH 1101	General Psychology	3
HIS 215 or HIS 216 or HIS 112 or PSC 251	History of the United States to 1876 or History of the United States Since 1876 or World History: Topical Approaches or National Government	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 ENG 393 or ENG 350 or ENG 351	Composition or Business and Professional Writing or Principles of Speech Communication or Professional Communication	3	ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech	3
CSC 110 or CSC 160	Computer Programming I or Computer Programming II	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
EGR 205	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 308	Engineering Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
EGR 206	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
MTH 341	Probability and Statistics	3	STAT 3115	Engineering Statistics	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	30		Group 2 Major Requirements	30
	Group 1 Core Requirements	39		Group 1 Core Requirements	38
	Total Hours	69		Total Hours*	68

*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>Morehouse College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
ENG 102 or ENG 393 or ENG 350 or ENG 351	Composition or Business and Professional Writing or Principles of Speech Communication or Professional Communication	3	ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech	3
HIS 215 or HIS 216 or HIS 112	History of the United States to 1876 or History of the United States Since 1876 or World History: Topical Approaches	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200	American History to 1877 or American History since 1877 or Modern Western Civilization	3
CHE 111	Elementary Inorganic Chemistry I	3	CHEM 1320	General Chemistry II	3
BIO 111	General Biology	4	BIO SCI 1213	Principles of Biology Department will substitute for BIO SCI 1113.	4
EGR 205	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 308	Engineering Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
EGR 206	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
MTH 341	Probability and Statistics	3	STAT 3115	Engineering Statistics (Will be substituted for STAT 3113.)	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	28		Group 2 Major Requirements	28
	Group 1 Core Requirements	39		Group 1 Core Requirements	38
	Total Hours	67		Total Hours*	66

*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>Morehouse College</u>		<u>Semester</u>	<u>Missouri S&T</u>	
ENG 102 or ENG 393 or ENG 350 or ENG 351	Composition or Business and Professional Writing or Principles of Speech Communication or Professional Communication	3	ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech
HIS 215 or HIS 216 or HIS 112 or PSC 251	History of the United States to 1876 or History of the United States Since 1876 or World History: Topical Approaches or National Government	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
EGR 205	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics
EGR 308	Engineering Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics
EGR 206	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials
BIO 111 or CHE 112 or CHE 231	General Biology (3) or Elementary Inorganic Chemistry (3) or Organic Chemistry I (4)	3-4	BIO SCI 1213 or CHEM 1320 or CHEM 2210	Principles of Biology or General Chemistry II or Organic Chemistry I
	<i>See your advisor for course options.</i>	3		Humanities/Social Science Elective
	<i>See your advisor for course options.</i>	3		Humanities/Social Science Elective
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives
	Group 2 Major Requirements	24		Group 2 Major Requirements
	Group 1 Core Requirements	39		Group 1 Core Requirements
	Total Hours	63		Total Hours*
				62

*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>Morehouse College</u>		<u>Semester</u>	<u>Missouri S&T</u>	
HIS 215 or HIS 216 or HIS 112 or PSC 251	History of the United States to 1876 or History of the United States Since 1876 or World History: Topical Approaches or National Government	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
ENG 102 or ENG 393 or ENG 350 or ENG 351	Composition or Business and Professional Writing or Principles of Speech Communication or Professional Communication	3	ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech
CSC 110 or CSC 160	Computer Programming I or Computer Programming II	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)
EGR 205	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics
EGR 206	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials
MTH 271 or MTH 341	Intro to Linear Algebra or Probability and Statistics I	3	MATH 3108 or STAT 3115	Linear Algebra I or Engineering Statistics
	Literature Elective	3		Literature Elective
	<i>See your advisor for course options.</i>	3		Humanities/Social Science Elective
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives
	Group 2 Major Requirements	24		Group 2 Major Requirements
	Group 1 Core Requirements	39		Group 1 Core Requirements
	Total Hours	63		Total Hours*
				62

*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>Morehouse College</u>		<u>Semester</u>	<u>Missouri S&T</u>	
ENG 102 or ENG 393 or ENG 350 or ENG 351	Composition or Business and Professional Writing or Principles of Speech Communication or Professional Communication	3	ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech
HIS 215 or HIS 216 or HIS 112 or PSC 251	History of the United States to 1876 or History of the United States Since 1876 or World History: Topical Approaches or National Government	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
EGR 205	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics
MTH 341	Probability and Statistics I	3	STAT 3115	Engineering Statistics
EGR 206	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials
CHE 111	Elementary Inorganic Chemistry I	3	CHEM 1320	General Chemistry II
CHE231 or CHE 321 or PHY 254	Elementary Organic Chemistry I (4) or Elementary Physical Chemistry (3) or Optics and Modern Physics (3)	3-4	CHEM 2210 or CHEM 3410 or PHYSICS 2305	Organic Chemistry I (4) or Chemical Thermodynamics I (3) or Intro to Modern Physics (3)
				<i>Not specifically required for the degree but will satisfy Out-of-Department Technical Elective Requirement.</i>
	See your advisor for course options.	3		Humanities/Social Science Elective
	See your advisor for course options.	3		Humanities/Social Science Elective
	See your advisor for course options.	5		Maximum Free Electives
	Group 2 Major Requirements	32		Group 2 Major Requirements
	Group 1 Core Requirements	39		Group 1 Core Requirements
	Total Hours	71		Total Hours*
				70

*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>Morehouse College</u>		<u>Semester</u>	<u>Missouri S&T</u>	
ENG 102 or ENG 393	Composition or Business and Professional Writing	3	ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing
HIS 215 or HIS 216 or HIS 112 or PSC 251	History of the United States to 1876 or History of the United States Since 1876 or World History: Topical Approaches or National Government	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
EGR 205	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics
EGR 308	Engineering Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics
EGR 206	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials
MTH 341	Probability and Statistics	3	STAT 3115	Engineering Statistics
	See your advisor for course options.	3		Humanities/Social Science Elective
	See your advisor for course options.	3		Humanities/Social Science Elective
	No free electives applied to the degree.	0		Maximum Free Electives
	Group 2 Major Requirements	24		Group 2 Major Requirements
	Group 1 Core Requirements	39		Group 1 Core Requirements
	Total Hours	63		Total Hours*
				62

*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>Morehouse College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
ENG 102 or ENG 393	Composition or Business and Professional Writing	3	ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing	3
HIS 215 or HIS 216 or HIS 112 or PSC 251	History of the United States to 1876 or History of the United States Since 1876 or World History: Topical Approaches or National Government	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
MTH 271 or MTH 272 or MTH 255	Intro to Linear Algebra or Linear Algebra or Intro to Set Theory	3	MATH 3108 or MATH 3109	Linear Algebra or Foundations of Mathematics	3
EGR 205	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 206	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
MTH 341	Probability and Statistics	3	STAT 3115	Engineering Statistics	3
PHY 254	Optics and Modern Physics	3	PHYSICS 2305	Intro to Modern Physics	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	33		Group 2 Major Requirements	33
	Group 1 Core Requirements	39		Group 1 Core Requirements	38
	Total Hours	72		Total Hours*	71

*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>Morehouse College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
ENG 102 or ENG 393	Composition or Business and Professional Writing	3	ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing	3
HIS 215 or HIS 216 or HIS 112 or PSC 251	History of the United States to 1876 or History of the United States Since 1876 or World History: Topical Approaches or National Government	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
EGR 205	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 308	Engineering Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
EGR 206	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	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	21		Group 2 Major Requirements	21
	Group 1 Core Requirements	39		Group 1 Core Requirements	38
	Total Hours	60		Total Hours*	59

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