

**Clark Atlanta University — Missouri S&T**  
**General Engineering Transfer Guide**  
 Effective as of Fall 2017

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>Clark Atlanta University</u>			<u>Semester</u>	<u>Missouri S&amp;T</u>			
CMAT 111 and CMAT 112	Calculus I and Calculus II	8		MATH 1214 and MATH 1215	Calculus for Engineers I and Calculus for Engineers II	8	
					Grade of C or better is required.		
CMAT 211	Calculus III	4		MATH 2222	Calculus with Analytic Geometry III	4	
CMAT 212	Differential Equations	3		MATH 3304	Elementary Differential Equations	3	
CPHY 121,121L and CPHY 122, 122L and CPHY 123, 123L	Physics I: Mechanics and Lab and Physics II: Elec, Magnet Lab and III: Optics, Mod Phys and Lab	3 3 3	Physics	PHYSICS 1135 and PHYSICS 2135	Engineering Physics I and Engineering Physics II	8	
					Grade of C or better is required.		
CCHE 111	General Chemistry I	4		CHEM 1310, 1319	General Chemistry I and Lab	5	
CEGR 101 and	Intro to Engineering and	3		FR ENG 1100 and	Study and Careers in Engineering and		
CEGR 110	Engineering Graphics	3		MECH ENG 1720	Engineering Design with Computer Appl	4	
CENG 105	College Composition I	3		ENGLISH 1120	Exposition and Argumentation	3	
CECO 252 or CECO 251	Principles of Microeconomics or Principles of Macroeconomics	4		ECON 1100 or ECON 1200	Principles of Microeconomics or Principles of Macroeconomics	3	
Total Hours			26				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

<u>Clark Atlanta University</u>	<u>Semester</u>	<u>Missouri S&amp;T</u>	
CHIS 211 or CHIS 212 or CPSC 219 CENG 106 or CSTA 101 CCIS 105 CEGR 201 CEGR 211 CEGR 251 CMAT 214 or CMAT 321	History of the US Before 1865 or History of the United States Since 1865 or American Government and Politics College Composition II or Fundamentals of Speech Structured Programming with C Electrical Circuit Analysis Engineering Statics Mechanics of Materials Linear Algebra or Mathematical Probability and Statistics I	3 3 3 3 3 4 3 3 3 3	HISTORY 1300 or HISTORY 1310 or POL SCI 1200 ENGLISH 1160 or SPMS 1185 CS 1971, 1981 EE 2800 CIV ENG 2200 CIV ENG 2210 MATH 3108 or STAT 3115
		American History to 1877 or American History since 1877 or American Government Writing and Research or Principles of Speech Intro to Programming Method and Lab (C++) Circuit Analysis I Engineering Mechanics-Statics Mechanics of Materials Linear Algebra I or Engineering Statistics <small>(Will satisfy the Advanced Math/Comp Sci elective requirement.)</small>	3 3 3 3 3 3 3 3 3 3
	<i>See your advisor for course options.</i>	Literature Elective	3
	<i>See your advisor for course options.</i>	Ethics Elective	3
	<i>No free electives applied to the degree.</i>	Maximum Free Electives	0
	Group 2 Major Requirements	Group 2 Major Requirements	27
	Group 1 Core Requirements	Group 1 Core Requirements	38
	Total Hours	Total Hours*	65

\*S&T advisor permission is required to transfer more than 66 credits toward the S&T Aerospace Engineering degree.

## Architectural Engineering Group 2 Major Requirements

<u>Clark Atlanta University</u>	<u>Semester</u>	<u>Missouri S&amp;T</u>	
CHIS 211 or CHIS 212 CEGR 211 CEGR 311 CEGR 251 CMAT 321	History of the US Before 1865 or History of the United States Since 1865 Engineering Statics Engineering Dynamics Mechanics of Materials Mathematical Probability and Statistics I	3 3 3 3 3 3	HISTORY 1300 or HISTORY 1310 CIV ENG 2200 MECH ENG 2350 CIV ENG 2210 STAT 3115
		American History to 1877 or American History since 1877 <small>*HISTORY 1200 is preferred; 1300 or 1310 will also be accepted.</small> Engineering Mechanics-Statics Engineering Mechanics-Dynamics Mechanics of Materials Engineering Statistics <small>(Will be substituted for STAT 3113.)</small>	3 3 3 3 3
		Writing and Research or Public Speaking or Humanities/Social Science Elective: history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language	3
CENG 106 or CSTA 101	College Composition II or Fundamentals of Speech	ENGLISH 1160 or SPMS 1185 or HSS Elective	3
	<i>No free electives applied to the degree.</i>	Maximum Free Electives	0
	Group 2 Major Requirements	Group 2 Major Requirements	18
	Group 1 Core Requirements	Group 1 Core Requirements	38
	Total Hours	Total Hours*	56

\*S&T advisor permission is required to transfer more than 66 credits toward the S&T Architectural Engineering degree.

## Ceramic Engineering Group 2 Major Requirements

<u>Clark Atlanta University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
CHIS 211 or CHIS 212 or CPSC 219	History of the US Before 1865 or History of the United States Since 1865 or American Government and Politics	3	HISTORY 1300 or HISTORY 1310 or POL SCI 1200	American History to 1877 or American History since 1877 or American Government	3
CEGR 211	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
CEGR 251	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
CCHE 231	Organic Chemistry I	4	CHEM 2210/2219	Organic Chemistry I and Lab (Not a specific requirement. Will satisfy technical elective requirement.)	5
CCHE 112	General Chemistry II	4	CHEM 1320	General Chemistry II	3
CMAT 321	Mathematical Probability and Statistics I	3	STAT 3115	Engineering Statistics	3
		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 Humanities/Social Science Elective	3
CENG 106 or CSTA 101	College Composition II or Fundamentals of Speech <i>See your advisor for course options.</i>	3		Maximum Free Electives	0
	<i>No free electives applied to the degree.</i>				
	Group 2 Major Requirements	23		Group 2 Major Requirements	26
	Group 1 Core Requirements	26		Group 1 Core Requirements	38
	Total Hours	49		Total Hours*	64

\*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>Clark Atlanta University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
CENG 106	College Composition II	3	ENGLISH 1160	Writing and Research	3
CHIS 211 or CHIS 212 or CPSC 219	History of the US Before 1865 or History of the United States Since 1865 or American Government and Politics	3	HISTORY 1300 or HISTORY 1310 or POL SCI 1200	American History to 1877 or American History since 1877 or American Government	3
CCHE 112	General Chemistry II	4	CHEM 1320	General Chemistry II	5
CCHE 231	Organic Chemistry I	4	CHEM 2210	Organic Chemistry I	3
CCHE 221	Organic Chemistry II	4	CHEM 2220	Organic Chemistry II (Will satisfy science elective requirement.)	3
CCIS 105 or CIS 103	Structured Programming with C or Scientific Comp. for Simu, Ana	3	CS 1971, 1981 or CS 1972, 1982	Intro to Programming Method and Lab (C++) or Intro to MATLAB Programming and Lab	3
CMAT 321	Mathematical Probability and Statistics I	3	STAT 3115	Engineering Statistics (Will be substituted for STAT 3113.)	3
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>			Maximum Free Electives	0
	Group 2 Major Requirements	24		Group 2 Major Requirements	29
	Group 1 Core Requirements	26		Group 1 Core Requirements	38
	Total Hours	50		Total Hours*	67

\*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>Clark Atlanta University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
CENG 106	College Composition II	3	ENGLISH 1160	Writing and Research	3
CHIS 211 or CHIS 212 or CPSC 219	History of the US Before 1865 or History of the United States Since 1865 or American Government and Politics	3	HISTORY 1300 or HISTORY 1310 or POL SCI 1200	American History to 1877 or American History since 1877 or American Government	3
CCHE 112	General Chemistry II	4	CHEM 1320	General Chemistry II	5
CCHE 231	Organic Chemistry I	4	CHEM 2210	Organic Chemistry I	3
CCHE 221	Organic Chemistry II	4	CHEM 2220	Organic Chemistry II (Will satisfy science elective requirement.)	3
CCIS 105 or CIS 103	Structured Programming with C or Scientific Comp. for Simu, Ana	3	CS 1971, 1981 or CS 1972, 1982	Intro to Programming Method and Lab (C++) or Intro to MATLAB Programming and Lab	3
CMAT 321	Mathematical Probability and Statistics I	3	STAT 3115	Engineering Statistics (Will be substituted for STAT 3113.)	3
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>			Maximum Free Electives	0
	Group 2 Major Requirements	24		Group 2 Major Requirements	29
	Group 1 Core Requirements	26		Group 1 Core Requirements	38
	Total Hours	50		Total Hours*	67

\*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>Clark Atlanta University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>	
CENG 106 or CSTA 101	College Composition II or Fundamentals of Speech	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech 3
CHIS 211 or CHIS 212 or CPSC 219	History of the US Before 1865 or History of the United States Since 1865 or American Government and Politics	3	HISTORY 1300 or HISTORY 1310 or POL SCI 1200	American History to 1877 or American History since 1877 or American Government 3
CEGR 211	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics 3
CEGR 311	Engineering Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics 3
CEGR 251	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials 3
CMAT 321	Mathematical Probability and Statistics I	3	STAT 3115	Engineering Statistics (Will be substituted for STAT 3113.) 3
<i>See your advisor for course options.</i>			Humanities/Social Science Elective 3	
<i>No free electives applied to the degree.</i>			Maximum Free Electives 0	
Group 2 Major Requirements		18	Group 2 Major Requirements 21	
Group 1 Core Requirements		26	Group 1 Core Requirements 38	
Total Hours		44	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

<u>Clark Atlanta University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>	
CSTA 101	Fundamentals of Speech	3	SPMS 1185	Public Speaking 3
CENG 106	College Composition II	3	ENGLISH 1160	Writing and Research 3
CHIS 211 or CHIS 212 or CPSC 219	History of the US Before 1865 or History of the United States Since 1865 or American Government and Politics	3	HISTORY 1300 or HISTORY 1310 or POL SCI 1200	American History to 1877 or American History since 1877 or American Government 3
CCIS 123	Data Structures	3	CS 1575	Data Structures 3
CEGR 211 and CEGR 311	Engineering Statics and Engineering Dynamics	6	CIV ENG 2200 and MECH ENG 2350	Engineering Mechanics-Statics and Engineering Mechanics-Dynamics (Both courses combined will satisfy a required engineering science elective.) 6
CEGR 201	Electrical Circuit Analysis	4	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
CMAT 321	Mathematical Probability and Statistics I	3	STAT 3115	Engineering Statistics (Will be substituted for STAT 3117.) 3
<i>See your advisor for course options.</i>			Humanities/Social Science Elective 3	
<i>See your advisor for course options.</i>			Maximum Free Electives 3	
Group 2 Major Requirements		25	Group 2 Major Requirements 30	
Group 1 Core Requirements		26	Group 1 Core Requirements 38	
Total Hours		51	Total Hours* 68	

\*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>Clark Atlanta University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>	
CSTA 101	Fundamentals of Speech	3	SPMS 1185	Public Speaking 3
CENG 106	College Composition II	3	ENGLISH 1160	Writing and Research 3
CHIS 211 or CHIS 212 or CPSC 219	History of the US Before 1865 or History of the United States Since 1865 or American Government and Politics	3	HISTORY 1300 or HISTORY 1310 or POL SCI 1200	American History to 1877 or American History since 1877 or American Government 3
CEGR 211 and CEGR 311	Engineering Statics and Engineering Dynamics	6	CIV ENG 2200 and MECH ENG 2350	Engineering Mechanics-Statics and Engineering Mechanics-Dynamics (Both courses combined will satisfy a required engineering science elective.) 6
CEGR 201	Electrical Circuit Analysis	4	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
CMAT 321	Mathematical Probability and Statistics I	3	STAT 3115	Engineering Statistics (Will be substituted for STAT 3117.) 3
<i>See your advisor for course options.</i>			Humanities/Social Science Elective 3	
<i>See your advisor for course options.</i>			Maximum Free Electives 3	
Group 2 Major Requirements		22	Group 2 Major Requirements 27	
Group 1 Core Requirements		26	Group 1 Core Requirements 38	
Total Hours		48	Total Hours* 65	

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

## Engineering Management Group 2 Major Requirements

<u>Clark Atlanta University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
CPSY 211	General Psychology	3	PSYCH 1101	General Psychology	3
CHIS 211 or	History of the US Before 1865 or		HISTORY 1300 or	American History to 1877 or	
CHIS 212 or	History of the United States Since 1865 or	3	HISTORY 1310 or	American History since 1877 or	3
CPSC 219	American Government and Politics		POL SCI 1200	American Government	
CENG 106 or	College Composition II or		ENGLISH 1160 or	Writing and Research or	
CSTA 101	Fundamentals of Speech	3	SPMS 1185	Principles of Speech	3
CIS 103	Scientific Comp. for Simu. Ana	3	CS 1972, 1982	Intro to MATLAB Programming and Lab	3
CEGR 201	Electrical Circuit Analysis	4	EE 2800	Circuit Analysis I	3
CEGR 211	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
CEGR 311	Engineering Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
CEGR 251	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
CMAT 321	Mathematical Probability and Statistics I	3	STAT 3115	Engineering Statistics	3
<i>See your advisor for course options.</i>			Humanities/Social Science Elective		3
<i>See your advisor for course options.</i>			Maximum Free Electives		3
Group 2 Major Requirements		28	Group 2 Major Requirements		33
Group 1 Core Requirements		26	Group 1 Core Requirements		38
Total Hours		54	Total Hours*		71

\*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>Clark Atlanta University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
CENG 106 or	College Composition II or	3	ENGLISH 1160 or	Writing and Research or	
CSTA 101	Fundamentals of Speech		SPMS 1185	Principles of Speech	3
CHIS 211 or	History of the US Before 1865 or		HISTORY 1300 or	American History to 1877 (preferred) or	
CHIS 212	History of the United States Since 1865	3	HISTORY 1310	American History since 1877 (preferred)	3
CCHE 112	General Chemistry II	4	CHEM 1320	General Chemistry II	3
CBIO 111	General Biology I	4	BIO SCI 1113	General Biology	4
CEGR 211	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
CEGR 311	Engineering Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
CEGR 251	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
CMAT 321	Mathematical Probability and Statistics I	3	STAT 3115	Engineering Statistics (Will be substituted for STAT 3113.)	3
<i>See your advisor for course options.</i>			Humanities/Social Science Elective		3
<i>No free electives applied to the degree.</i>			Maximum Free Electives		0
Group 2 Major Requirements		26	Group 2 Major Requirements		28
Group 1 Core Requirements		26	Group 1 Core Requirements		38
Total Hours		52	Total Hours*		66

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

## Geological Engineering Group 2 Major Requirements

<u>Clark Atlanta University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
CENG 106 or	College Composition II or	3	ENGLISH 1160 or	Writing and Research or	
CSTA 101	Fundamentals of Speech		SPMS 1185	Principles of Speech	3
CHIS 211 or	History of the US Before 1865 or		HISTORY 1300 or	American History to 1877 or	
CHIS 212 or	History of the United States Since 1865 or	3	HISTORY 1310 or	American History since 1877 or	3
CPSC 219	American Government and Politics		POL SCI 1200	American Government	
CEGR 211	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
CEGR 311	Engineering Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
CBIO 111 or	General Biology I or		BIO SCI 1113 or	General Biology or	
CCHE 112 or	General Chemistry II or	4	CHEM 1320 or	General Chemistry II or	
CCHE 231	Organic Chemistry I		CHEM 2210	Organic Chemistry I	
<i>See your advisor for course options.</i>			Humanities/Social Science Elective		3
<i>See your advisor for course options.</i>			Humanities/Social Science Elective		3
<i>No free electives applied to the degree.</i>			Maximum Free Electives		0
Group 2 Major Requirements		16	Group 2 Major Requirements		18
Group 1 Core Requirements		26	Group 1 Core Requirements		38
Total Hours		42	Total Hours*		56

\*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>Clark Atlanta University</u>	<u>Semester</u>	<u>Missouri S&amp;T</u>	
CHIS 211 or CHIS 212 or CPSC 219 CENG 106 or CSTA 101	History of the US Before 1865 or History of the United States Since 1865 or American Government and Politics College Composition II or Fundamentals of Speech	3	HISTORY 1300 or HISTORY 1310 or POL SCI 1200 ENGLISH 1160 or SPMS 1185
		3	American History to 1877 or American History since 1877 or American Government Writing and Research or Principles of Speech
		3	3
CCIS 105 or CIS 103 CEGR 201 CEGR 211 CEGR 251 CMAT 214 or CMAT 321	Structured Programming with C or Scientific Comp. for Simu, Ana Electrical Circuit Analysis Engineering Statics Mechanics of Materials Linear Algebra or Mathematical Probability and Statistics I	3 3 4 3 3 3	CS 1971, 1981 or CS 1972, 1982 EE 2800 CIV ENG 2200 CIV ENG 2210 MATH 3108 or STAT 3115
			Intro to Programming Method and Lab (C++) or Intro to MATLAB Programming and Lab Circuit Analysis I Engineering Mechanics-Statics Mechanics of Materials Linear Algebra I or Engineering Statistics (Will satisfy the Advanced Math/Comp Sci elective requirement.)
			3 4 3 3 3 3
			Literature Elective
			3
	<i>See your advisor for course options.</i>		Humanities/Social Science Elective
	<i>No free electives applied to the degree.</i>		3
			Maximum Free Electives
			0
	Group 2 Major Requirements	13	Group 2 Major Requirements
	Group 1 Core Requirements	26	Group 1 Core Requirements
	Total Hours	39	Total Hours*
			18 38 56

\*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>Clark Atlanta University</u>	<u>Semester</u>	<u>Missouri S&amp;T</u>	
CENG 106 or CSTA 101 CHIS 211 or CHIS 212 or CPSC 219	College Composition II or Fundamentals of Speech History of the US Before 1865 or History of the United States Since 1865 or American Government and Politics	3	ENGLISH 1160 or SPMS 1185 HISTORY 1300 or HISTORY 1310 or POL SCI 1200
		3	Writing and Research or Principles of Speech American History to 1877 or American History since 1877 or American Government
		3	3
CEGR 211 CMAT 321 CEGR 251 CCHE 112	Engineering Statics Mathematical Probability and Statistics I Mechanics of Materials General Chemistry II	3 3 3 4	CIV ENG 2200 STAT 3115 CIV ENG 2210 CHEM 1320 CHEM 2210 or EE 2800
			Engineering Mechanics-Statics Engineering Statistics Mechanics of Materials General Chemistry II Organic Chemistry I or Electrical Circuits
			3 3 3 3 3
CCHE 231 or CEGR 201	Organic Chemistry I or Electrical Circuits Analysis	4	Electrical Circuits
			3
	<i>See your advisor for course options.</i>		<i>Not specifically required for the degree but will satisfy Out-of-Department Technical Elective Requirement</i>
	<i>See your advisor for course options.</i>		Humanities/Social Science Elective
	<i>See your advisor for course options.</i>		3
			Humanities/Social Science Elective
			3
			Maximum Free Electives
			5
	Group 2 Major Requirements	23	Group 2 Major Requirements
	Group 1 Core Requirements	26	Group 1 Core Requirements
	Total Hours	49	Total Hours*
			32 38 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>Clark Atlanta University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
CENG 106	College Composition II	3	ENGLISH 1160	Writing and Research	3
CHIS 211 or	History of the US Before 1865 or		HISTORY 1300 or	American History to 1877 or	
CHIS 212 or	History of the United States Since 1865 or	3	HISTORY 1310 or	American History since 1877 or	3
CPSC 219	American Government and Politics		POL SCI 1200	American Government	
CMAT 321	Mathematical Probability and Statistics I	3	STAT 3115	Engineering Statistics	3
CEGR 211	Engineering Statics	3	CIV ENG 2200*	Engineering Mechanics-Statics	3
CEGR 311	Engineering Dynamics	3	MECH ENG 2350*	Engineering Mechanics-Dynamics	3
CEGR 251	Mechanics of Materials	3	CIV ENG 2210*	Mechanics of Materials	3
			*The combination of CIV ENG 2200 and MECH ENG 2350 will be substituted for MECH ENG 2340. The Combination of CIV ENG 22000 and 2210 and MECH ENG 2350 will be substituted for MI ENG 3812		
			Humanities/Social Science Elective		3
			Humanities/Social Science Elective		3
			Maximum Free Electives		0
		18	Group 2 Major Requirements		24
		26	Group 1 Core Requirements		38
Total Hours		44			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>Clark Atlanta University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
CENG 106	College Composition II	3	ENGLISH 1160	Writing and Research	3
CHIS 211 or	History of the US Before 1865 or		HISTORY 1300 or	American History to 1877 or	
CHIS 212 or	History of the United States Since 1865 or	3	HISTORY 1310 or	American History since 1877 or	3
CPSC 219	American Government and Politics		POL SCI 1200	American Government	
CCIS 105 or	Structured Programming with C or		CS 1971, 1981 or	Intro to Programming Method and Lab (C++) or	3
CIS 103	Scientific Comp. for Simu, Ana	3	CS 1972, 1982	Intro to MATLAB Programming and Lab	4
CEGR 211	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
CEGR 251	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
CMAT 321	Mathematical Probability and Statistics I	3	STAT 3115	Engineering Statistics	3
			Humanities/Social Science Elective		3
			Humanities/Social Science Elective		3
			Maximum Free Electives		6
		18	Group 2 Major Requirements		27
		26	Group 1 Core Requirements		38
Total Hours		44			65
			*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>Clark Atlanta University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
CENG 106	College Composition II	3	ENGLISH 1160	Writing and Research	3
CHIS 211 or	History of the US Before 1865 or		HISTORY 1300 or	American History to 1877 or	
CHIS 212 or	History of the United States Since 1865 or	3	HISTORY 1310 or	American History since 1877 or	3
CPSC 219	American Government and Politics		POL SCI 1200	American Government	
CEGR 211	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
CEGR 311	Engineering Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
CEGR 251	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
CMAT 321	Mathematical Probability and Statistics I	3	STAT 3115	Engineering Statistics	3
			Humanities/Social Science Elective		3
			Humanities/Social Science Elective		3
			Maximum Free Electives		0
		12	Group 2 Major Requirements		18
		26	Group 1 Core Requirements		38
Total Hours		38			56
			*S&T advisor permission is required to transfer more than 68 credits toward the S&T Petroleum Engineering degree.		