

# Truman State 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>Truman</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
MATH 198	Analytic Geometry and Calculus I	5	MATH 1214	Calculus for Engineers I Grade of C or better is required.	4
MATH 263	Analytic Geometry and Calculus II	5	MATH 1215	Calculus for Engineers II Grade of C or better is required.	4
MATH 264	Analytic Geometry and Calculus III	3	MATH 2222	Calculus with Analytic Geometry III Grade of C or better is required.	4
MATH 365	Ordinary Differential Equations	3	MATH 3304	Elementary Differential Equations	3
PHYS 195	Physics with Calculus	5	PHYSICS 1135	Engineering Physics I Grade of C or better is required.	4
PHYS 196	Physics with Calculus II	5	PHYSICS 2135	Engineering Physics II Grade of C or better is required.	4
CHEM 130	Chemical Principles I	4	CHEM 1310, 1319	General Chemistry I and Lab	5
PHYS 208	Design and Drafting	2	MECH ENG 1720	Engineering Design with Computer Appl	3
ENG 190	Writing as Critical Thinking	3	ENGLISH 1120	Exposition and Argumentation	3
ECON 201 or	Principles of Microeconomics or	3	ECON 1100 or	Principles of Microeconomics or	3
ECON 200	Principles of Macroeconomics	3	ECON 1200	Principles of Macroeconomics	3
Total Hours		38	Total Hours		37

### 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](http://ugs.mst.edu). Your campus may have additional acceptable options. Consult with your advisor or email [transfer@mst.edu](mailto:transfer@mst.edu) with questions.

## Aerospace Engineering Group 2 Major Requirements

		<u>Semester</u>	<u>Missouri S&amp;T</u>		
HIST 104 or HIST 106 or HIST 133 or POL 161 ENG 314 or COMM 170 or ENG 212 CS 180 MATH 357 or STAT 290	US History I, 1607-1877 or US History II, 1877-present or World Civilization since 1700 or American National Government English Composition II or Fundamentals of Speech or Technical Writing Foundations of Computer Science Linear Algebra or Statistics	3           3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200 ENGLISH 1160 or SPMS 1185 or ENGLISH 3560 CS 1570, 1580 MATH 3108 or STAT 3115	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government Writing and Research or Principles of Speech or Technical Writing Intro to Programming and Lab (C++) Linear Algebra I or Engineering Statistics (Will satisfy the Advanced Math/Comp Sci elective requirement.) Literature Elective Ethics Elective Maximum Free Electives	3           3 3 0
<i>See your advisor for course options.</i>					
<i>See your advisor for course options.</i>					
<i>No free electives applied to the degree.</i>					
	Group 2 Major Requirements	12		Group 2 Major Requirements	18
	Group 1 Core Requirements	38		Group 1 Core Requirements	37
	Total Hours	50		Total Hours*	55

\*S&T advisor permission is required to transfer more than 60 credits toward the S&T Aerospace Engineering degree.

## Architectural Engineering Group 2 Major Requirements

		<u>Semester</u>	<u>Missouri S&amp;T</u>		
HIST 133* (or History 104 or HIST 106)	World Civilization since 1700* US History I, 1607-1877 or History II, 1877-present 133 is preferred; 104 or 106 will also be accepted	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
STAT 290	Statistics	3	STAT 3115	Engineering Statistics (Will be substituted for STAT 3113.)	3
ENG 314 or COMM 170 or HSS Elective	English Composition II or Fundamentals of Speech 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
PHYS 140 or BIOL 107 or PHYS 246 or PHYS 350	Physical Geology or Introductory Biology I or Astronomy I or Modern Physics I	4	GEOLOGY 1110 or BIO SCI 1213, 1219 or PHYSICS 1505 or PHYSICS 2305	Physical and Environmental Geology or Principles of Biology or Introductory Astronomy or Intro to Modern Physics (or other chemistry, geology, biology, physics, or astronomy course that is not otherwise required for the degree) Applies to the degree as a basic science elective	3
<i>No free electives applied to the degree.</i>				Maximum Free Electives	0
	Group 2 Major Requirements	13		Group 2 Major Requirements	12
	Group 1 Core Requirements	38		Group 1 Core Requirements	37
	Total Hours	51		Total Hours*	49

\*S&T advisor permission is required to transfer more than 60 credits toward the S&T Architectural Engineering degree.

## Ceramic Engineering Group 2 Major Requirements

Truman State University		Semester	Missouri S&T	
HIST 104 or HIST 106 or HIST 133 or POL 161	US History I, 1607-1877 or US History II, 1877-present or World Civilization since 1700 or American 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
CHEM 329, 330	Organic Chemistry I and Lab	4	CHEM 2210/2219	Organic Chemistry I and Lab <small>(Not a specific requirement. Will satisfy technical elective requirement.)</small>
CHEM 131	Chemical Principles II	4	CHEM 1320, 1510	General Chemistry II and Qualitative Analysis CHEM 1510 is not a specific degree requirement, will transfer as general elective credit
STAT 290	Statistics	3	STAT 3115	Engineering Statistics
ENG 314 or COMM 170 or HSS Elective	English Composition II or Fundamentals of Speech or Humanities/Social Science Elective: history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language <i>See your advisor for course options.</i> <i>No free electives applied to the degree.</i>	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
				Humanities/Social Science Elective
				Maximum Free Electives
	Group 2 Major Requirements	17		Group 2 Major Requirements
	Group 1 Core Requirements	38		Group 1 Core Requirements
	Total Hours	55		Total Hours*
				57

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

## Chemical Engineering Group 2 Major Requirements

Truman State University		Semester	Missouri S&T	
ENG 314 or ENG 212	English Composition II or Technical Writing	3	ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing
HIST 104 or HIST 106 or HIST 133 or POL 161	US History I, 1607-1877 or US History II, 1877-present or World Civilization since 1700 or American 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
CHEM 131	Chemical Principles II	4	CHEM 1320	General Chemistry II
CHEM 329	Organic Chemistry I and Lab	3	CHEM 2210	Organic Chemistry I
CHEM 331	Organic Chemistry II	3	CHEM 2220	Organic Chemistry II <small>(Will satisfy science elective requirement.)</small>
CS 180	Foundations of Computer Science	3	CS 1570, 1580	Intro to Programming and Lab (C++)
STAT 290	Statistics	3	STAT 3115	Engineering Statistics <small>(Will be substituted for STAT 3113.)</small>
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective
	<i>No free electives applied to the degree.</i>			Maximum Free Electives
	Group 2 Major Requirements	22		Group 2 Major Requirements
	Group 1 Core Requirements	38		Group 1 Core Requirements
	Total Hours	60		Total Hours*
				66

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

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

Truman State University		Semester	Missouri S&T	
ENG 314 or ENG 212	English Composition II or Technical Writing	3	ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing
HIST 104 or HIST 106 or HIST 133 or POL 161	US History I, 1607-1877 or US History II, 1877-present or World Civilization since 1700 or American 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
CHEM 131	Chemical Principles II	4	CHEM 1320	General Chemistry II
CHEM 329	Organic Chemistry I	3	CHEM 2210	Organic Chemistry I
CHEM 331	Organic Chemistry II	3	CHEM 2220	Organic Chemistry II <small>(Will satisfy science elective requirement.)</small>
CS 180	Foundations of Computer Science	3	CS 1570, 1580	Intro to Programming and Lab (C++)
STAT 290	Statistics	3	STAT 3115	Engineering Statistics <small>(Will be substituted for STAT 3113.)</small>
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective
	<i>No free electives applied to the degree.</i>			Maximum Free Electives
	Group 2 Major Requirements	22		Group 2 Major Requirements
	Group 1 Core Requirements	38		Group 1 Core Requirements
	Total Hours	60		Total Hours*
				66

\*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>Truman State University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>	
ENG 314 or COMM 170 or ENG 212	English Composition II or Fundamentals of Speech or Technical Writing	3	ENGLISH 1160 or SPMS 1185 or ENGLISH 3560	Writing and Research or Public Speaking or Technical Writing
HIST 104 or HIST 106 or HIST 133 or POL 161 STAT 290	US History I, 1607-1877 or US History II, 1877-present or World Civilization since 1700 or American National Government Statistics	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200 STAT 3115	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government Engineering Statistics (Will be substituted for STAT 3113.)
<i>See your advisor for course options.</i>			Humanities/Social Science Elective	
<i>No free electives applied to the degree.</i>			Maximum Free Electives	
Group 2 Major Requirements		9	Group 2 Major Requirements	
Group 1 Core Requirements		38	Group 1 Core Requirements	
Total Hours		47	Total Hours*	
			12	
			37	
			49	

\*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>Truman State University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>	
COMM 170 ENG 314 or ENG 212	Fundamentals of Speech English Composition II or Technical Writing	3	SPMS 1185 ENGLISH 1160 or ENGLISH 3560	Principles of Speech Writing and Research or Technical Writing
HIST 104 or HIST 106 or HIST 133 or POL 161 CS 180 CS 185 MATH 357 STAT 290	US History I, 1607-1877 or US History II, 1877-present or World Civilization since 1700 or American National Government Foundations of Computer Science Intro to Computer Science II Linear Algebra Statistics	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200 CS 1570, 1580 CS 1575 MATH 3108 STAT 3115	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government Intro to Programming and Lab (C++) Data Structures Linear Algebra (Will satisfy a required math elective.) Engineering Statistics (Will be substituted for STAT 3117.)
<i>See your advisor for course options.</i>			Humanities/Social Science Elective	
<i>See your advisor for course options.</i>			Maximum Free Electives	
Group 2 Major Requirements		21	Group 2 Major Requirements	
Group 1 Core Requirements		38	Group 1 Core Requirements	
Total Hours		59	Total Hours*	
			27	
			37	
			64	

\*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>Truman State University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>	
COMM 170 ENG 314 or ENG 212	Fundamentals of Speech English Composition II or Technical Writing	3	SPMS 1185 ENGLISH 1160 or ENGLISH 3560	Principles of Speech Writing and Research or Technical Writing
HIST 104 or HIST 106 or HIST 133 or POL 161 CS 180 MATH 357 STAT 290	US History I, 1607-1877 or US History II, 1877-present or World Civilization since 1700 or American National Government Foundations of Computer Science Linear Algebra Statistics	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200 CS 1570, 1580 MATH 3108 STAT 3115	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government Intro to Programming and Lab (C++) Linear Algebra Engineering Statistics (Will be substituted for STAT 3117.)
<i>See your advisor for course options.</i>			Humanities/Social Science Elective	
<i>See your advisor for course options.</i>			Maximum Free Electives	
Group 2 Major Requirements		18	Group 2 Major Requirements	
Group 1 Core Requirements		38	Group 1 Core Requirements	
Total Hours		56	Total Hours*	
			24	
			37	
			61	

\*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>Truman State University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
PSYC 166	General Psychology	3	PSYCH 1101	General Psychology	3
HIST 104 or	US History I, 1607-1877 or		HISTORY 1300 or	American History to 1877 or	
HIST 106 or	US History II, 1877-present or		HISTORY 1310 or	American History since 1877 or	
HIST 133 or	World Civilization since 1700 or	3	HISTORY 1200 or	Modern Western Civilization or	3
POL 161	American National Government		POL SCI 1200	American Government	
ENG 314 or	English Composition II or		ENGLISH 1160 or	Writing and Research or	
COMM 170 or	Fundamentals of Speech or	3	SPMS 1185 or	Principles of Speech or	3
ENG 212	Technical Writing		ENGLISH 3560	Technical Writing	
STAT 290	Statistics	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		12	Group 2 Major Requirements		18
Group 1 Core Requirements		38	Group 1 Core Requirements		37
Total Hours		50	Total Hours*		55

\*S&T advisor permission is required to transfer more than 28 credits toward the S&T Engineering Management degree.

## Environmental Engineering Group 2 Major Requirements

<u>Truman State University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
ENG 314 or	English Composition II or		ENGLISH 1160 or	Writing and Research or	
COMM 170 or	Fundamentals of Speech or	3	SPMS 1185 or	Public Speaking or	3
ENG 212	Technical Writing		ENGLISH 3560	Technical Writing	
HIST 104 or	US History I, 1607-1877 or		HISTORY 1300 or	American History to 1877 (preferred) or	
HIST 106 or	US History II, 1877-present or	3	HISTORY 1310 or	American History since 1877 (preferred) or	3
HIST 133	World Civilization since 1700		HISTORY 1200	Modern Western Civilization	
CHEM 131	Chemical Principles II	4	CHEM 1320	General Chemistry II	3
BIOL 100	Biology	4	BIO SCI 1113	General Biology	4
STAT 290	Statistics	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		17	Group 2 Major Requirements		19
Group 1 Core Requirements		38	Group 1 Core Requirements		37
Total Hours		55	Total Hours*		56

\*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>Truman State University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
ENG 314 or	English Composition II or		ENGLISH 1160 or	Writing and Research or	
COMM 170 or	Fundamentals of Speech or	3	SPMS 1185 or	Public Speaking or	3
ENG 212	Technical Writing		ENGLISH 3560	Technical Writing	
HIST 104 or	US History I, 1607-1877 or		HISTORY 1300 or	American History to 1877 or	
HIST 106 or	US History II, 1877-present or		HISTORY 1310 or	American History since 1877 or	
HIST 133 or	World Civilization since 1700 or	3	HISTORY 1200 or	Modern Western Civilization or	3
POL 161	American National Government		POL SCI 1200	American Government	
PHYS 140	Physical Geology	4	GEO 1110/GE 1150	Physical and Environmental Geology	3
BIOL 100 or	Biology or		BIO SCI 1113 or	General Biology or	
CHEM 131 or	Chemical Principles II or	4	CHEM 1320 or	General Chemistry II or	
CHEM 329	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		14	Group 2 Major Requirements		15
Group 1 Core Requirements		38	Group 1 Core Requirements		37
Total Hours		52	Total Hours*		52

\*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

<b>Truman State University</b>		<b>Semester</b>	<b>Missouri S&amp;T</b>	
HIST 104 or HIST 106 or HIST 133 or POL 161	US History I, 1607-1877 or US History II, 1877-present or World Civilization since 1700 or American 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 314 or COMM 170 or ENG 212	English Composition II or Fundamentals of Speech or Technical Writing	3	ENGLISH 1160 or SPMS 1185 or ENGLISH 3560	Writing and Research or Principles of Speech or Technical Writing
CS 180	Foundations of Computer Science	3	CS 1570, 1580	Intro to Programming and Lab (C++)
MATH 357 or STAT 290	Linear Algebra or Statistics	3	MATH 3108 or STAT 3115	Linear Algebra I or Engineering Statistics <small>(Will satisfy the Advanced Math/Comp Sci elective requirement.)</small>
<i>See your advisor for course options.</i>				Literature Elective
<i>No free electives applied to the degree.</i>				Humanities/Social Science Elective
				Maximum Free Electives
	Group 2 Major Requirements	3		Group 2 Major Requirements
	Group 1 Core Requirements	38		Group 1 Core Requirements
	Total Hours	41		Total Hours*
				46

\*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

<b>Truman State University</b>		<b>Semester</b>	<b>Missouri S&amp;T</b>	
ENG 314 or COMM 170 or ENG 212	English Composition II or Fundamentals of Speech or Technical Writing	3	ENGLISH 1160 or SPMS 1185 or ENGLISH 3560	Writing and Research or Public Speaking or Technical Writing
HIST 104 or HIST 106 or HIST 133 or POL 161	US History I, 1607-1877 or US History II, 1877-present or World Civilization since 1700 or American 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
STAT 290	Statistics	3	STAT 3115	Engineering Statistics
CHEM 131	Chemical Principles II	4	CHEM 1320	General Chemistry II
CHEM 329	Organic Chemistry I	3	CHEM 2210	Organic Chemistry I <small>Not specifically required for the degree but will satisfy Out-of-Department Technical Elective Requirement</small>
<i>See your advisor for course options.</i>				Humanities/Social Science Elective
<i>See your advisor for course options.</i>				Humanities/Social Science Elective
<i>See your advisor for course options.</i>				Maximum Free Electives
	Group 2 Major Requirements	16		Group 2 Major Requirements
	Group 1 Core Requirements	38		Group 1 Core Requirements
	Total Hours	54		Total Hours*
				63

\*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>Truman State University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>	
ENG 314 or	English Composition II or	3	ENGLISH 1160 or	Writing and Research or
ENG 212	Technical Writing		ENGLISH 3560	Technical Writing
HIST 104 or	US History I, 1607-1877 or		HISTORY 1300 or	American History to 1877 or
HIST 106 or	US History II, 1877-present or	3	HISTORY 1310 or	American History since 1877 or
HIST 133 or	World Civilization since 1700 or		HISTORY 1200 or	Modern Western Civilization or
POL 161	American National Government		POL SCI 1200	American Government
STAT 290	Statistics	3	STAT 3115	Engineering Statistics
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective
	<i>No free electives applied to the degree.</i>			Maximum Free Electives
	Group 2 Major Requirements	9		Group 2 Major Requirements
	Group 1 Core Requirements	38		Group 1 Core Requirements
	Total Hours	47		Total Hours*
				52

\*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>Truman State University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>	
ENG 314 or	English Composition II or	3	ENGLISH 1160 or	Writing and Research or
ENG 212	Technical Writing		ENGLISH 3560	Technical Writing
HIST 104 or	US History I, 1607-1877 or		HISTORY 1300 or	American History to 1877 or
HIST 106 or	US History II, 1877-present or	3	HISTORY 1310 or	American History since 1877 or
HIST 133 or	World Civilization since 1700 or		HISTORY 1200 or	Modern Western Civilization or
POL 161	American National Government		POL SCI 1200	American Government
CS 180	Foundations of Computer Science	3	CS 1570, 1580	Intro to Programming and Lab (C++)
STAT 290	Statistics	3	STAT 3115	Engineering Statistics
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective
	<i>See your advisor for course options.</i>			Maximum Free Electives
	Group 2 Major Requirements	12		Group 2 Major Requirements
	Group 1 Core Requirements	38		Group 1 Core Requirements
	Total Hours	50		Total Hours*
				61

\*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>Truman State University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>	
ENG 314 or	English Composition II or	3	ENGLISH 1160 or	Writing and Research or
ENG 212	Technical Writing		ENGLISH 3560	Technical Writing
HIST 104 or	US History I, 1607-1877 or		HISTORY 1300 or	American History to 1877 or
HIST 106 or	US History II, 1877-present or	3	HISTORY 1310 or	American History since 1877 or
HIST 133 or	World Civilization since 1700 or		HISTORY 1200 or	Modern Western Civilization or
POL 161	American National Government		POL SCI 1200	American Government
PHYS 140	Physical Geology	4	GEO 1110/GE 1150	Physical and Environmental Geology
STAT 290	Statistics	3	STAT 3115	Engineering Statistics
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective
	<i>See your advisor for course options.</i>			Humanities/Social Science Elective
	<i>No free electives applied to the degree.</i>			Maximum Free Electives
	Group 2 Major Requirements	7		Group 2 Major Requirements
	Group 1 Core Requirements	38		Group 1 Core Requirements
	Total Hours	45		Total Hours*
				49

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