

# Principia College — 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>Partner School</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
MATH 181	Calculus I	5	MATH 1214	Calculus for Engineers I <small>Grade of C or better is required.</small>	5
MATH 182	Calculus II	5	MATH 1215	Calculus for Engineers II <small>Grade of C or better is required.</small>	5
MATH 283	Multivariable Calculus	4	MATH 2222	Calculus with Analytic Geometry III <small>Grade of C or better is required.</small>	4
MATH 380	Differential Equations	3	MATH 3304	Elementary Differential Equations	3
PHYS 201 and PHYS 202 and PHYS 203 and PHYS 204	Physics for Scientists and Engineers I and Physics for Scientists and Engineers II and Physics for Scientists and Engineers III and Physics for Scientists and Engineers IV	15	PHYSICS 1135 and PHYSICS 2135	Engineering Physics I and Engineering Physics II* <small>*The combination of PHYS 201, 202, 203, and 204 is equivalent to the combination of PHYSICS 1135 and 2135.</small>	8
CHEM 131	Fundamentals of Chemistry I	4	CHEM 1310, 1319	General Chemistry I and Lab	5
ENGR 160	Intro to the Engineering Profession	2	FR ENG 1100	Study and Careers in Engineering	1
WRIT 151	Fundamentals of Academic Writing	3	MECH ENG 1720	Engineering Design with Computer Appl	3
ECON 203 or ECON 204	Principles of Microeconomics or Principles of Macroeconomics	3	ENGLISH 1120	Exposition and Argumentation	3
<b>Total Hours</b>					<b>44</b>
					<b>Total Hours</b>
					<b>40</b>

### 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>Partner School</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
HIST 264 or POL S 120	19th Century Europe or American Government and Politics	3	HISTORY 1300 or POL SCI 1200	American History to 1877 or American Government	3
GEN 101 or WRIT 158 or MCOM 140	FYE: Integrated Learning or Reading and Writing Inquiry or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
CSCI 171	Introduction to Programming	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
ENGR 206	Electrical Engineering - Circuit Analysis	3	EE 2800	Circuit Analysis I	3
ENGR 201	Engineering Mechanics: Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 203	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
MATH 273 or MATH 364	Linear Algebra or Mathematical Statistics	3	MATH 3108 or STAT 3115	Linear Algebra I or Engineering Statistics <small>(Will satisfy the Advanced Math/Comp Sci elective requirement.)</small>	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		21	Group 2 Major Requirements		27
Group 1 Core Requirements		44	Group 1 Core Requirements		40
Total Hours		65	Total Hours*		67

\*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>Partner School</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
HIST 264	19th Century Europe	3	HISTORY 1200	Modern Western Civilization	3
ENGR 201	Engineering Mechanics: Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 202	Engineering Mechanics: Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
ENGR 203	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
MATH 364	Mathematical Statistics	3	STAT 3115	Engineering Statistics <small>(Will be substituted for STAT 3113.)</small>	3
GEN 101 or WRIT 158 or MCOM 140 or HSS Elective	FYE: Integrated Learning or Reading and Writing Inquiry or Public Speaking or <i>See your advisor for course options.</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	3
GEOL 111 or PHYS 151	Introductory Geology or Descriptive Astronomy	4	GEOLOGY 1111 or PHYSICS 1505	Intro to Physical Geology or Introductory Astronomy <small>Applies to the degree as a basic science elective</small>	3
<i>No free electives applied to the degree.</i>			Maximum Free Electives		0
Group 2 Major Requirements		22	Group 2 Major Requirements		21
Group 1 Core Requirements		44	Group 1 Core Requirements		40
Total Hours		66	Total Hours*		61

\*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

Ceramic Engineering Group 2 Major Requirements					
Partner School		Semester	Missouri S&T		
HIST 264 or POL S 120	19th Century Europe or American Government and Politics	3	HISTORY 1200 or POL SCI 1200	Modern Western Civilization or American Government	3
ENGR 201	Engineering Mechanics: Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 203	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
CHEM 262	Organic Chemistry I	4	CHEM 2210/2219	Organic Chemistry I and Lab <small>(Not a specific requirement. Will satisfy technical elective requirement.)</small>	5
CHEM 132	Fundamentals of Chemistry II	4	CHEM 1320	General Chemistry II	3
MATH 364	Mathematical Statistics	3	STAT 3115	Engineering Statistics	3
GEN 101 or WRIT 158 or MCOM 140 or HSS Elective	FYE: Integrated Learning or Reading and Writing Inquiry or Public Speaking or <small>See your advisor for course options.</small>	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
<small>No free electives applied to the degree.</small>			Maximum Free Electives		0
		Group 2 Major Requirements			26
		Group 1 Core Requirements			40
Total Hours		67	Total Hours*		66

\*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

Chemical Engineering Group 2 Major Requirements					
Partner School		Semester	Missouri S&T		
GEN 101 or WRIT 158	FYE: Integrated Learning or Reading and Writing Inquiry	3	ENGLISH 1160	Writing and Research	3
HIST 264 or POL S 120	19th Century Europe or American Government and Politics	3	HISTORY 1200 or POL SCI 1200	Modern Western Civilization or American Government	3
CHEM 132	Fundamentals of Chemistry II	4	CHEM 1320	General Chemistry II	5
CHEM 262	Organic Chemistry I	4	CHEM 2210	Organic Chemistry I	3
CHEM 263	Organic Chemistry II	4	CHEM 2220	Organic Chemistry II <small>(Will satisfy science elective requirement.)</small>	3
CSCI 171	Introduction to Programming	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
MATH 364	Mathematical Statistics	3	STAT 3115	Engineering Statistics <small>(Will be substituted for STAT 3113.)</small>	3
<small>See your advisor for course options.</small>			Humanities/Social Science Elective		3
<small>See your advisor for course options.</small>			Humanities/Social Science Elective		3
<small>No free electives applied to the degree.</small>			Maximum Free Electives		0
		Group 2 Major Requirements			29
		Group 1 Core Requirements			40
Total Hours		68	Total Hours*		69

\*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

Chemical Engineering - Biochemical Engineering Emphasis Group 2 Major Requirements					
Partner School		Semester	Missouri S&T		
GEN 101 or WRIT 158	FYE: Integrated Learning or Reading and Writing Inquiry	3	ENGLISH 1160	Writing and Research	3
HIST 264 or POL S 120	19th Century Europe or American Government and Politics	3	HISTORY 1200 or POL SCI 1200	Modern Western Civilization or American Government	3
CHEM 132	Fundamentals of Chemistry II	4	CHEM 1320	General Chemistry II	5
CHEM 262	Organic Chemistry I	4	CHEM 2210	Organic Chemistry I	3
CHEM 263	Organic Chemistry II	4	CHEM 2220	Organic Chemistry II <small>(Will satisfy science elective requirement.)</small>	3
CSCI 171	Introduction to Programming	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
MATH 364	Mathematical Statistics	3	STAT 3115	Engineering Statistics <small>(Will be substituted for STAT 3113.)</small>	3
<small>See your advisor for course options.</small>			Humanities/Social Science Elective		3
<small>See your advisor for course options.</small>			Humanities/Social Science Elective		3
<small>No free electives applied to the degree.</small>			Maximum Free Electives		0
		Group 2 Major Requirements			29
		Group 1 Core Requirements			40
Total Hours		68	Total Hours*		69

\*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>Partner School</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
GEN 101 or WRIT 158 or MCOM 140	FYE: Integrated Learning or Reading and Writing Inquiry or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Public Speaking	3
HIST 264 or POLS 120	19th Century Europe or American Government and Politics	3	HISTORY 1200 or POL SCI 1200	Modern Western Civilization or American Government	3
ERTH 111	Introductory Geology	4	GEO 1110/GE 1150	Intro to Physical Geology	3
ENGR 201	Engineering Mechanics: Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 202	Engineering Mechanics: Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
ENGR 203	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
MATH 364	Mathematical 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		22	Group 2 Major Requirements		24
Group 1 Core Requirements		44	Group 1 Core Requirements		40
Total Hours		66	Total Hours*		64

\*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>Partner School</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
MCOM 140	Public Speaking	3	SPMS 1185	Public Speaking	3
GEN 101 or WRIT 158	FYE: Integrated Learning or Reading and Writing Inquiry	3	ENGLISH 1160	Writing and Research	3
HIST 264 or POLS 120	19th Century Europe or American Government and Politics	3	HISTORY 1200 or POL SCI 1200	Modern Western Civilization or American Government	3
MATH 261	Discrete Math	3	CS 1200	Discrete Math for Computer Science	3
ENGR 201 and ENGR 202	Engineering Mechanics: Statics and Engineering Mechanics: 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
MATH 364	Mathematical Statistics	3	STAT 3115	Engineering Statistics (Will be substituted for STAT 3117.)	3
MATH 273	Linear Algebra	3	MATH 3108	Linear Algebra (Will satisfy a required math elective.)	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		24	Group 2 Major Requirements		30
Group 1 Core Requirements		44	Group 1 Core Requirements		40
Total Hours		68	Total Hours*		70

\*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>Partner School</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
MCOM 140	Public Speaking	3	SPMS 1185	Public Speaking	3
GEN 101 or WRIT 158	FYE: Integrated Learning or Reading and Writing Inquiry	3	ENGLISH 1160	Writing and Research	3
HIST 264 or POLS 120	19th Century Europe or American Government and Politics	3	HISTORY 1200 or POL SCI 1200	Modern Western Civilization or American Government	3
ENGR 201 and ENGR 202	Engineering Mechanics: Statics and Engineering Mechanics: 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
MATH 273	Linear Algebra	3	MATH 3108	Linear Algebra	3
MATH 364	Mathematical Statistics	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		21	Group 2 Major Requirements		27
Group 1 Core Requirements		44	Group 1 Core Requirements		40
Total Hours		65	Total Hours*		67

\*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

Partner School		Semester	Missouri S&T		
HIST 264 or POL 120	19th Century Europe or American Government and Politics	3	HISTORY 1200 or POL SCI 1200	Modern Western Civilization or American Government	3
GEN 101 or WRIT 158 or MCOM 140	FYE: Integrated Learning or Reading and Writing Inquiry or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
ENGR 206	Electrical Engineering - Circuit Analysis	3	EE 2800	Circuit Analysis I	3
ENGR 201	Engineering Mechanics: Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 202	Engineering Mechanics: Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
ENGR 203	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
MATH 364	Mathematical 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
		21			27
		44			40
Total Hours		65	Total Hours*		67

\*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

Partner School		Semester	Missouri S&T		
GEN 101 or WRIT 158 or MCOM 140	FYE: Integrated Learning or Reading and Writing Inquiry or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Public Speaking	3
HIST 264	19th Century Europe	3	HISTORY 1200	Modern Western Civilization	3
ERTH 111	Introductory Geology	4	GEO 1110/GE 1150	Intro to Physical Geology	3
CHEM 132	Fundamentals of Chemistry II	4	CHEM 1320	General Chemistry II	3
ENGR 201	Engineering Mechanics: Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 202	Engineering Mechanics: Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
ENGR 203	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
MATH 364	Mathematical 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
		26			27
		44			40
Total Hours		70	Total Hours*		67

\*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

Partner School		Semester	Missouri S&T		
GEN 101 or WRIT 158 or MCOM 140	FYE: Integrated Learning or Reading and Writing Inquiry or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Public Speaking	3
HIST 264 or POL 120	19th Century Europe or American Government and Politics	3	HISTORY 1200 or POL SCI 1200	Modern Western Civilization or American Government	3
ERTH 111	Introductory Geology	4	GEO 1110/GE 1150	Physical and Environmental Geology	3
ENGR 201	Engineering Mechanics: Statics	3	GEO 1119/GE 1119	Physical and Environmental Geology Lab	1
ENGR 202	Engineering Mechanics: Dynamics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 203	Mechanics of Materials	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
CHEM 132 or CHEM 262	Fundamentals of Chemistry II or Organic Chemistry I	4	CIV ENG 2210	Mechanics of Materials	3
<i>See your advisor for course options.</i>			CHEM 1320 or CHEM 2210	General Chemistry II or Organic Chemistry I	3
<i>See your advisor for course options.</i>			<i>or any 3-hour course in chemistry, geochemistry, or biology</i>		3
<i>No free electives applied to the degree.</i>			Humanities/Social Science Elective		3
<i>No free electives applied to the degree.</i>			Humanities/Social Science Elective		3
<i>No free electives applied to the degree.</i>			Maximum Free Electives		0
		23			25
		44			40
Total Hours		67	Total Hours*		65

\*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>Partner School</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
HIST 264 or POL 120 GEN 101 or WRIT 158 or MCOM 140	19th Century Europe or American Government and Politics FYE: Integrated Learning or Reading and Writing Inquiry or Public Speaking	3	HISTORY 1200 or POL SCI 1200	Modern Western Civilization or American Government	3
CSCI 171	Introduction to Programming	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
ENGR 206	Electrical Engineering - Circuit Analysis	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
ENGR 201	Engineering Mechanics: Statics	3	EE 2800	Circuit Analysis I	3
ENGR 203	Mechanics of Materials	3	CIV ENG 2200	Engineering Mechanics-Statics	3
MATH 273 or MATH 364	Linear Algebra or Mathematical Statistics	3	CIV ENG 2210	Mechanics of Materials	3
			MATH 3108 or STAT 3115	Linear Algebra I or Engineering Statistics (Will satisfy the Advanced Math/Comp Sci elective requirement.)	3
				Literature 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	12		Group 2 Major Requirements	18
	Group 1 Core Requirements	44		Group 1 Core Requirements	40
	Total Hours	56		Total Hours*	58

\*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>Partner School</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
GEN 101 or WRIT 158 or MCOM 140	FYE: Integrated Learning or Reading and Writing Inquiry or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Public Speaking	3
HIST 264 or POL 120	19th Century Europe or American Government and Politics	3	HISTORY 1200 or POL SCI 1200	Modern Western Civilization or American Government	3
ENGR 201	Engineering Mechanics: Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
MATH 364	Mathematical Statistics	3	STAT 3115	Engineering Statistics	3
ENGR 203	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
CHEM 132	Fundamentals of Chemistry II	4	CHEM 1320	General Chemistry II	3
ENGR 206	Electrical Engineering - Circuit Analysis	3	CHEM 2210 or EE 2800	Organic Chemistry I or Electrical Circuits	3
				<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	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	5
	Group 2 Major Requirements	22		Group 2 Major Requirements	32
	Group 1 Core Requirements	44		Group 1 Core Requirements	40
	Total Hours	66		Total Hours*	72

\*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>Partner School</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
GEN 101 or WRIT 158	FYE: Integrated Learning or Reading and Writing Inquiry	3	ENGLISH 1160	Writing and Research	3
HIST 264 or POLS 120	19th Century Europe or American Government and Politics	3	HISTORY 1200 or POL SCI 1200	Modern Western Civilization or American Government	3
MATH 364	Mathematical Statistics	3	STAT 3115	Engineering Statistics	3
ENGR 201	Engineering Mechanics: Statics	3	CIV ENG 2200*	Engineering Mechanics-Statics	3
ENGR 202	Engineering Mechanics: Dynamics	3	MECH ENG 2350*	Engineering Mechanics-Dynamics	3
ERTH 111	Introductory Geology	4	GEO 1110/GE 1150	Intro to Physical Geology	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		19	Group 2 Major Requirements		24
Group 1 Core Requirements		44	Group 1 Core Requirements		40
Total Hours		63	Total Hours*		64

\*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>Partner School</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
GEN 101 or WRIT 158	FYE: Integrated Learning or Reading and Writing Inquiry	3	ENGLISH 1160	Writing and Research	3
HIST 264 or POLS 120	19th Century Europe or American Government and Politics	3	HISTORY 1200 or POL SCI 1200	Modern Western Civilization or American Government	3
CSCI 171	Introduction to Programming	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
ENGR 201	Engineering Mechanics: Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 203	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
MATH 364	Mathematical 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>				Humanities/Social Science Elective	3
<i>See your advisor for course options.</i>				Maximum Free Electives	6
Group 2 Major Requirements		18	Group 2 Major Requirements		27
Group 1 Core Requirements		44	Group 1 Core Requirements		40
Total Hours		62	Total Hours*		67

\*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>Partner School</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
GEN 101 or WRIT 158	FYE: Integrated Learning or Reading and Writing Inquiry	3	ENGLISH 1160	Writing and Research	3
HIST 264 or POLS 120	19th Century Europe or American Government and Politics	3	HISTORY 1200 or POL SCI 1200	Modern Western Civilization or American Government	3
ERTH 111	Introductory Geology	4	GEO 1110/GE 1150	Physical and Environmental Geology	3
			GEO ENG 1119	Physical and Environmental Geology Lab	1
ENGR 201	Engineering Mechanics: Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 202	Engineering Mechanics: Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	3
ENGR 203	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
MATH 364	Mathematical 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>				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		22
Group 1 Core Requirements		44	Group 1 Core Requirements		40
Total Hours		60	Total Hours*		62

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