

Maryville University — Missouri S&T

General Engineering Transfer Guide

Effective as of Fall 2023

Complete Group 1 - Core Requirements and Group 2 - Major Requirements for major of choice.

Group 1 - Core Requirements: All Majors Take All Courses

Engineering students take all Group 1 - Core Requirements and Group 2 - Major Requirements for major of choice. Math prerequisites: While they are not part of Missouri S&T engineering degree requirements, algebra and trigonometry skills are critical to success in calculus. To prepare for entry into calculus, students should follow math placement testing and advising recommendations at their college.

<u>Maryville University</u>		<u>Semester</u>	<u>Missouri S&T</u>		
MATH151	Calculus I	4	MATH 1214	Calculus I	4
MATH 152	Calculus II	4	MATH 1215	Calculus II	4
MATH 251	Calculus III	4	MATH 2222	Calculus III	4
MATH 320	Applied Differential Equations	3	MATH 3304	Elementary Differential Equations	3
PHYS 153	Calculus-Based Physics I	4	PHYSICS 1135	Engineering Physics I	4
PHYS 154	Calculus-Based Physics II	4	PHYSICS 2135	Engineering Physics II	4
CHEM 103, 103L	General Chemistry I and Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5
ENGL 101	Composition: Theme Writing	3	ENGLISH 1120	Exposition and Argumentation	3
MG 202 or MG 201	Microeconomics or Macroeconomics	3	ECON 1100 or ECON 1200	Principles of Microeconomics or Principles of Macroeconomics	3
Total Hours					33
					34

Group 2 - Major Requirements: Take All Courses for Major of Choice

Engineering students take all Group 1 - Core Requirements (above) and Group 2 - Major Requirements for chosen major from list below. See course requirements on following pages.

Aerospace Engineering
Architectural Engineering
Ceramic Engineering
Chemical Engineering
Chemical Engineering/Biochemistry Emphasis
Civil Engineering
Computer Engineering
Electrical Engineering

Engineering Management
Environmental Engineering
Geological Engineering
Mechanical Engineering
Metallurgical Engineering
Mining Engineering
Nuclear Engineering
Petroleum Engineering

Engineering Major Requirements are detailed on the following pages.

Free Electives: Some programs allow Free Electives as indicated within each major. Free Electives should be selected in consultation with your advisor and may not include remedial/deficiency courses, algebra, trigonometry, pre-calculus, or extra credits in required courses.

Humanities/Social Science (HSS) Electives: HSS electives may include any art, English and technical communication, etymology, foreign language, music, philosophy, speech and media studies, or theatre. Your campus may have additional acceptable options. Consult with your advisor or email transfer@mst.edu with questions. See Missouri S&T online catalog at <https://catalog.mst.edu/undergraduate/degreeprogramsandcourses/> for more information.

Aerospace Engineering Group 2 Major Requirements

<u>Maryville University</u>		<u>Semester</u>	<u>Missouri S&T</u>		
HIST 132 or HIST 121 or HIST 122 or PSCI 101	World History II:1500-Present or U.S. History to 1877 or U.S. History since 1877 or American Government	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
ENGL 104 or SPCH 110	Composition: The Essay or Oral Communication	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
COSC 151 or COSC 152	Computer Science I (C++) or Computer Science II (C++ OOP)	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
MATH 316 or MATH 370, 371	Applied Linear Algebra or Mathematical Statistics I and II	3	MATH 3108 or STAT 3115	Linear Algebra I or Engineering Statistics or <small>(Will satisfy the Advanced Math/Comp Sci elective requirement.)</small>	3
ENGL 127 or ENGL 257 or ENGL 119	Early American Voices or World Literature or Survey of Women's Lit <small>(or other literature elective)</small>	3	ENGLISH 1221 or ENGLISH 1231 or ENGLISH 2242	American Literature: 1600 to 1865 or World Literature I or Literature by Women <small>(or other literature elective)</small>	3
	Ethics Elective	3		Ethics Elective <small>Engineering, business, bio, social or other ethics approved by advisor.</small>	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	33		Group 1 Core Requirements	34
	Total Hours	51		Total Hours*	52

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

Architectural Engineering Group 2 Major Requirements

<u>Maryville University</u>		<u>Semester</u>	<u>Missouri S&T</u>		
HIST 132 or HIST 121 or HIST 122	World History II:1500-Present or U.S. History to 1877 or U.S. History since 1877	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
MATH 370, 371	Mathematical Statistics I and II	6	STAT 3115	Engineering Statistics <small>(Will be substituted for STAT 3113.)</small>	3
HSS Elective	Humanities/Social Science Elective: history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language	3	HSS Elective	Humanities/Social Science Elective: history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language	3
ADAH 302	Modern Art and Architecture	3	ART 3203	Architectural Design I	3
SCI 309	Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	19		Group 2 Major Requirements	15
	Group 1 Core Requirements	33		Group 1 Core Requirements	34
	Total Hours	52		Total Hours*	49

*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>Maryville University</u>		<u>Semester</u>	<u>Missouri S&T</u>		
HIST 132 or HIST 121 or HIST 122 or PSCI 101	World History II:1500-Present or U.S. History to 1877 or U.S. History since 1877 or American Government	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
CHEM 203, 203L	Organic Chemistry I and Lab	4	CHEM 2210, 2219	Organic Chemistry I and Lab (Will satisfy the advanced chemistry elective requirement.)	4
CHEM 104	General Chemistry II	4	CHEM 1320	General Chemistry II	3
MATH 370, 371	Mathematical Statistics I and II	6	STAT 3115	Engineering Statistics (or any statistics course 3000-level or higher. Satisfies statistics elective requirement.)	3
ENGL 104 or SPCH 110 or HSS Elective	Composition: The Essay or Oral 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 Principles of Speech or Humanities/Social Science Elective: history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	23		Group 2 Major Requirements	19
	Group 1 Core Requirements	33		Group 1 Core Requirements	34
	Total Hours	56		Total Hours*	53

*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>Maryville University</u>		<u>Semester</u>	<u>Missouri S&T</u>		
HIST 132 or HIST 121 or HIST 122 or PSCI 101	World History II:1500-Present or U.S. History to 1877 or U.S. History since 1877 or American Government	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
CHEM 104, 104L	General Chemistry II and Lab	4	CHEM 1320	General Chemistry II	3
CHEM 203, 203L	Organic Chemistry I and Lab	4	CHEM 2210, 2219*	Organic Chemistry I and Lab* *The lab is not required for the degree, will transfer as 1 of the 9 science elective credits (below) .	4
CHEM 204, 204L or BIOL 351 or BIOL 316	Organic Chemistry II and Lab or Cell Biology or General Microbiology	8	CHEM 2220 or CHEM 2510 or BIO SCI 2213, 2219	Organic Chemistry II (3) or Analytical Chemistry (4) or Cell Biology and Lab (4) (Will satisfy science elective requirement. Select up to 9 hours from these options or CHEM 2219 Organic Chemistry Lab.)	8
COSC 151 or COSC 152	Computer Science I (C++) or Computer Science II (C++ OOP)	3	CS 1971,1981*	Intro to Programming Methodology and Lab* (C++) *Course will be substituted for CS 1500.	3
MATH 370, 371	Mathematical Statistics I and II	6	STAT 3115	Engineering Statistics (Will be substituted for STAT 3113.)	3
SPCH 110	Oral Communication	3	SP&MS 1185	Principles of Speech	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	34		Group 2 Major Requirements	30
	Group 1 Core Requirements	33		Group 1 Core Requirements	34
	Total Hours	67		Total Hours*	64

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

Chemical Engineering - Biochemical Engineering Emphasis Group 2 Major Requirements

<u>Maryville University</u>		<u>Semester</u>	<u>Missouri S&T</u>		
HIST 132 or HIST 121 or HIST 122 or PSCI 101	World History II:1500-Present or U.S. History to 1877 or U.S. History since 1877 or American Government	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
CHEM 104, 104L	General Chemistry II and Lab	4	CHEM 1320	General Chemistry II	3
CHEM 203, 203L	Organic Chemistry I and Lab	4	CHEM 2210, 2219*	Organic Chemistry I (3) and Lab* (1) <small>*The lab is not required for the degree, will transfer as 1 of the 9 science elective credits (below).</small>	4
CHEM 204, 204L or BIOL 351 or BIOL 316	Organic Chemistry II and Lab or Cell Biology or General Microbiology	8	CHEM 2220 or CHEM 2510 or BIO SCI 2213, 2219	Organic Chemistry II (3) or Analytical Chemistry (4) or Cell Biology and Lab (4) <small>(Will satisfy science elective requirement. Select up to 9 hours from these options or CHEM 2219 Organic Chemistry Lab.)</small>	8
COSC 151 or COSC 152	Computer Science I (C++) or Computer Science II (C++ OOP)	3	CS 1971,1981*	Intro to Programming Methodology and Lab* (C++) <small>*Course will be substituted for CS 1500.</small>	3
MATH 370, 371	Mathematical Statistics I and II	6	STAT 3115	Engineering Statistics <small>(Will be substituted for STAT 3113.)</small>	3
SPCH 110	Oral Communication	3	SP&MS 1185	Principles of Speech	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	No free electives applied to the degree.	0		Maximum Free Electives	0
	Group 2 Major Requirements	34		Group 2 Major Requirements	30
	Group 1 Core Requirements	33		Group 1 Core Requirements	34
	Total Hours	67		Total Hours*	64

*S&T advisor permission is required to transfer more than 70 credits toward the S&T Chemical/Biochemical Engineering degree.

Civil Engineering Group 2 Major Requirements

<u>Maryville University</u>		<u>Semester</u>	<u>Missouri S&T</u>		
ENGL 104 or SPCH 110	Composition: The Essay or Oral Communication	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
HIST 132 or HIST 121 or HIST 122 or PSCI 101	World History II:1500-Present or U.S. History to 1877 or U.S. History since 1877 or American Government	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
SCI 309	Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
MATH 370, 371	Mathematical Statistics I and II	6	STAT 3115	Engineering Statistics <small>(Will be substituted for STAT 3113.)</small>	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	No free electives applied to the degree.	0		Maximum Free Electives	0
	Group 2 Major Requirements	19		Group 2 Major Requirements	15
	Group 1 Core Requirements	33		Group 1 Core Requirements	34
	Total Hours	52		Total Hours*	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>Maryville University</u>		<u>Semester</u>	<u>Missouri S&T</u>		
SPCH 110	Oral Communication	3	SPMS 1185	Principles of Speech	3
ENGL 104	Composition: The Essay	3	ENGLISH 1160	Writing and Research	3
HIST 132 or HIST 121 or HIST 122 or PSCI 101	World History II:1500-Present or U.S. History to 1877 or U.S. History since 1877 or American Government	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
CHEM 203, 203L or BIOL 351 or BIOL 260	Organic Chemistry I and Lab or Cell Biology or General Genetics	4	CHEM 2210 or BIO SCI 2213 or BIO SCI 2223	Organic Chemistry I (3) or Cell Biology (3) or General Genetics (3) <small>Satisfies a required engineering/science elective.</small>	3
MATH 316	Applied Linear Algebra	3	MATH 3108	Linear Algebra or <small>(Will satisfy a required math elective.)</small>	3
MATH 370, 371	Mathematical Statistics I and II	6	STAT 3115	Engineering Statistics <small>(Will be substituted for STAT 3117.)</small>	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	Maximum Free Electives	3		Maximum Free Electives	3
	Group 2 Major Requirements	28		Group 2 Major Requirements	24
	Group 1 Core Requirements	33		Group 1 Core Requirements	34
	Total Hours	61		Total Hours*	58

*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>Maryville University</u>		<u>Semester</u>	<u>Missouri S&T</u>		
SPCH 110	Oral Communication	3	SPMS 1185	Principles of Speech	3
ENGL 104	Composition: The Essay	3	ENGLISH 1160	Writing and Research	3
HIST 132 or HIST 121 or HIST 122 or PSCI 101	World History II:1500-Present or U.S. History to 1877 or U.S. History since 1877 or American Government	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
CHEM 203, 203L or BIOL 351 or BIOL 260	Organic Chemistry I and Lab or Cell Biology or General Genetics	4	CHEM 2210 or BIO SCI 2213 or BIO SCI 2223	Organic Chemistry I or Cell Biology or General Genetics	3
MATH 316	Applied Linear Algebra	3	MATH 3108	Linear Algebra	3
MATH 370, 371	Mathematical Statistics I and II	6	STAT 3115	Engineering Statistics <small>(Will be substituted for STAT 3117.)</small>	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	Maximum Free Electives	3		Maximum Free Electives	3
	Group 2 Major Requirements	28		Group 2 Major Requirements	24
	Group 1 Core Requirements	33		Group 1 Core Requirements	34
	Total Hours	61		Total Hours*	58

*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>Maryville University</u>		<u>Semester</u>	<u>Missouri S&T</u>		
Psych 101	General Psychology	3	PSYCH 1101	General Psychology	3
HIST 132 or HIST 121 or HIST 122 or PSCI 101	World History II:1500-Present or U.S. History to 1877 or U.S. History since 1877 or American Government	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
SPCH 110	Oral Communication	3	SPMS 1185	Principles of Speech	3
ENGL 104	Composition: The Essay	3	ENGLISH 1160	Writing and Research	3
COSC 151 or COSC 152	Computer Science I (C++) or Computer Science II (C++ OOP)	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
MATH 370, 371	Mathematical Statistics I and II	6	STAT 3115	Engineering Statistics	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	Maximum Free Electives	3		Maximum Free Electives	3
	Group 2 Major Requirements	27		Group 2 Major Requirements	24
	Group 1 Core Requirements	33		Group 1 Core Requirements	34
	Total Hours	60		Total Hours*	58

*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>Maryville University</u>		<u>Semester</u>	<u>Missouri S&T</u>		
ENGL 104 or SPCH 110	Composition: The Essay or Oral Communication	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
HIST 132 or HIST 121 or HIST 122	World History II:1500-Present or U.S. History to 1877 or U.S. History since 1877	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310	Modern Western Civilization or American History to 1877 or American History since 1877	3
SCI 309	Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
CHEM 104, 104L	General Chemistry II and Lab	4	CHEM 1320	General Chemistry II	3
BIOL 103, 103L	Intro to Biology and Lab	4	BIO SCI 1113	General Biology	3
MATH 370, 371	Mathematical Statistics I and II	6	STAT 3115	Engineering Statistics (Will be substituted for STAT 3113.)	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	27		Group 2 Major Requirements	21
	Group 1 Core Requirements	33		Group 1 Core Requirements	34
	Total Hours	60		Total Hours*	55

*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>Maryville University</u>		<u>Semester</u>	<u>Missouri S&T</u>		
HIST 132 or HIST 121 or HIST 122 or PSCI 101	World History II:1500-Present or U.S. History to 1877 or U.S. History since 1877 or American Government	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
SCI 309	Geology	4	GEO ENG 1150 (GEOLOGY 1110)	Physical and Environmental Geology	3
MATH 370, 371	Mathematical Statistics I and II	6	STAT 3115	Engineering Statistics (Will be substituted for STAT 3113.)	3
BIOL 103, 103L or CHEM 104 or CHEM 203	Intro to Biology and Lab or General Chemistry II or Organic Chemistry I	4	BIO SCI 1113 or CHEM 1320 or CHEM 2210	General Biology or General Chemistry II or Organic Chemistry I <small>or any 3-hour course in chemistry, geochemistry, or biology. Satisfies chemistry/geochemistry elective requirement.</small>	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	23		Group 2 Major Requirements	18
	Group 1 Core Requirements	33		Group 1 Core Requirements	34
	Total Hours	56		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

<u>Maryville University</u>		<u>Semester</u>	<u>Missouri S&T</u>		
HIST 132 or HIST 121 or HIST 122 or PSCI 101	World History II:1500-Present or U.S. History to 1877 or U.S. History since 1877 or American Government	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
ENGL 104 or SPCH 110	Composition: The Essay or Oral Communication	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
COSC 151 or COSC 152	Computer Science I (C++) or Computer Science II (C++ OOP)	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
MATH 316 or MATH 370, 371	Applied Linear Algebra or Mathematical Statistics I and II	3	MATH 3108 or STAT 3115	Linear Algebra I or Engineering Statistics <small>(Will satisfy the Advanced Math/Computer Science elective requirement.)</small>	3
ENGL 127 or ENGL 257 or ENGL 119	Early American Voices or World Literature or Survey of Women's Lit <small>(or other literature elective)</small>	3	ENGLISH 1221 or ENGLISH 1231 or ENGLISH 2242	American Literature: 1600 to 1865 or World Literature I or Literature by Women <small>(or other literature elective)</small>	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	18		Group 2 Major Requirements	18
	Group 1 Core Requirements	33		Group 1 Core Requirements	34
	Total Hours	51		Total Hours*	52

*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>Maryville University</u>		<u>Semester</u>	<u>Missouri S&T</u>		
ENGL 104 or SPCH 110	Composition: The Essay or Oral Communication	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
HIST 132 or HIST 121 or HIST 122 or PSCI 101	World History II:1500-Present or U.S. History to 1877 or U.S. History since 1877 or American Government	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
MATH 370, 371	Mathematical Statistics I and II	6	STAT 3115	Engineering Statistics	3
CHEM 104	General Chemistry II	4	CHEM 1320	General Chemistry II	3
CHEM 203, 203L	Organic Chemistry I and Lab	4	CHEM 2210, 2219	Organic Chemistry I and Lab <small>Not specifically required for the degree but will satisfy Out-of-Department Technical Elective Requirement.</small>	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	Maximum Free Electives	5		Maximum Free Electives	3
	Group 2 Major Requirements	31		Group 2 Major Requirements	24
	Group 1 Core Requirements	33		Group 1 Core Requirements	34
	Total Hours	64		Total Hours*	58

*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>Maryville University</u>		<u>Semester</u>	<u>Missouri S&T</u>		
ENGL 104	Composition: The Essay	3	ENGLISH 1160	Writing and Research	3
HIST 132 or HIST 121 or HIST 122 or PSCI 101	World History II:1500-Present or U.S. History to 1877 or U.S. History since 1877 or American Government	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
MATH 370, 371	Mathematical Statistics I and II	6	STAT 3115	Engineering Statistics	3
SCI 309	Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	22		Group 2 Major Requirements	18
	Group 1 Core Requirements	33		Group 1 Core Requirements	34
	Total Hours	55		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

ENGL 104 or SPCH 110	Composition: The Essay or Oral Communication	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
HIST 132 or HIST 121 or HIST 122 or PSCI 101	World History II:1500-Present or U.S. History to 1877 or U.S. History since 1877 or American Government	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
COSC 151 or COSC 152	Computer Science I (C++) or Computer Science II (C++ OOP)	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
MATH 316	Applied Linear Algebra	3	MATH 3108	Linear Algebra	3
MATH 370, 371	Mathematical Statistics I and II	6	STAT 3115	Engineering Statistics	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	Maximum Free Electives	6		Maximum Free Electives	6
	Group 2 Major Requirements	30		Group 2 Major Requirements	27
	Group 1 Core Requirements	33		Group 1 Core Requirements	34
	Total Hours	63		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>Maryville University</u>		<u>Semester</u>	<u>Missouri S&T</u>		
ENGL 104	Composition: The Essay	3	ENGLISH 1160	Writing and Research	3
HIST 132 or HIST 121 or HIST 122 or PSCI 101	World History II:1500-Present or U.S. History to 1877 or U.S. History since 1877 or American Government	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History since 1877 or American Government	3
SCI 309	Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	16		Group 2 Major Requirements	15
	Group 1 Core Requirements	33		Group 1 Core Requirements	34
	Total Hours	49		Total Hours*	49

*S&T advisor permission is required to transfer more than 69 credits toward the S&T Petroleum Engineering degree.