

## Maryville University — Missouri S&T

### General Engineering

Transfer Guide Effective as of Fall 2025

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

Students are not required to complete all courses on this guide before transferring to Missouri S&T.

### 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.

Maryville University			Semester	Missouri S&T		
MATH 151	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, 153L	Calculus-Based Physics I and Lab	4		PHYSICS 1135	Engineering Physics I	4
PHYS 154, 154L	Calculus-Based Physics II and Lab	4		PHYSICS 2135	Engineering Physics II	4
COMP 101	Writing Across the Disciplines I: Rhetorical Situations	3		ENGLISH 1120	Exposition and Argumentation	3
		Total Hours	26			Total Hours 26

### 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**  
**Biomedical Engineering/Biomanufacturing or Biomaterials**  
**Ceramic Engineering**  
**Chemical Engineering and 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.

This transfer guide is published by Missouri University of Science and Technology and is in effect as of Fall 2025.  
Further information or updates are available from Missouri S&T Transfer Admissions at [transfer.mst.edu](http://transfer.mst.edu), [transfer@mst.edu](mailto:transfer@mst.edu), or 800-522-0938.

## Aerospace Engineering Group 2 Major Requirements

Maryville University		Semester		Missouri S&T	
COMP 104 or COMM 110	Writing Across the Disciplines II: Research & Argument or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small>	3
CHEM 103, 103L	General Chemistry I and Lab	4	CHEM 1310*, 1319	General Chemistry I and Lab <small>*CHEM 1310 will be substituted for CHEM 1305.</small>	5
COSC 151	Computer Science I (C++)	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
MATH 316	Applied Linear Algebra	3	MATH 3108	Linear Algebra I <small>Satisfies the Advanced Math/Statistics elective requirement.</small>	3
Ethics	Ethics Elective <small>Engineering, business, bio, social ethics approved by advisor .</small>	3	Ethics	Ethics Elective <small>Engineering, business, bio, social ethics approved by advisor</small>	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. <b>*At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.</b>					
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.					
ENGL 316 or ENGL 317 or ENGL 127 or ENGL 222 or ENGL 357 or HIST 121* or HIST 122* or ART 100 or MUS 106 or	British Literature I or British Literature II or Early American Voices or American Realism and Modernism or World Literature I: The Dawn of Story or American History to 1877* or American History Since 1877* or Art Appreciation I or Music Appreciation I or <small>*Satisfies the State of Missouri government requirement.</small>	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation <small>*Satisfies the State of Missouri government requirement.</small>	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.					
HIST 131 or HIST 132* or EDUC 220 or PHIL 220 or PHIL 230 or PSCI 101* or PSYCH 101 or Foreign Language	World History to 1500 or World History Since 1500* or Economic Geography or Intro to Philosophy or Logic: Inf and Methodology or American Government* or General Psychology or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	6
Humanities, Arts, and Social Sciences Select 3 hours.					
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3	HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
No free electives applied to the degree.		0	Maximum Free Electives		0
Group 2 Major Requirements		31	Group 2 Major Requirements		32
Group 1 Core Requirements		26	Group 1 Core Requirements		26
Total Hours		57	Total Hours*		58
<small>*S&amp;T advisor permission is required to transfer more than 68 credits toward the S&amp;T Aerospace Engineering degree.</small>					

## Architectural Engineering Group 2 Major Requirements

Maryville University		Semester	Missouri S&T		
COMP 104 or COMM 110	Writing Across the Disciplines II: Research & Argument or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 103, 103L	General Chemistry I and Lab	4	CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
MATH 370 AND 371	Probability I (3) AND Probability II (3) The combination of MU MATH 370 and 371 is equivalent to S&T STAT 3117. Both courses must be taken to receive equivalent credit.	6	STAT 3117*	Intro to Probability and Statistics* *STAT 3117 will be substituted for STAT 3113. The combination of MU MATH 370 and 371 is equivalent to S&T STAT 3117. Both courses must be taken to receive equivalent credit.	3
SCI 309	Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. *At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.					
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.					
ENGL 316 or ENGL 317 or ENGL 127 or ENGL 222 or ENGL 357 or HIST 121* or HIST 122* or ART 100 or MUS 106 or	British Literature I or British Literature II or Early American Voices or American Realism and Modernism or World Literature I: The Dawn of Story or American History to 1877* or American History Since 1877* or Art Appreciation I or Music Appreciation I or *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines to include HISTORY 1200					
HIST 132*	World History Since 1500* *Satisfies the State of Missouri Government requirement.	3	HISTORY 1200*	Modern Western Civilization* *Satisfies the State of Missouri Government requirement.	3
PHIL 220 or PHIL 230 or PSCI 101* or PSYCH 101 or Foreign Language	Intro to Philosophy or Logic: Inf and Methodology or American Government* or General Psychology or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3	PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or Foreign Language	Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3
Humanities, Arts, and Social Sciences ART 3203 required.					
ADAH 302	Modern Art and Architecture	3	ART 3203	Architectural Design I	3
No free electives applied to the degree.		0	Maximum Free Electives		0
Group 2 Major Requirements		32	Group 2 Major Requirements		29
Group 1 Core Requirements		26	Group 1 Core Requirements		26
Total Hours		58	Total Hours*		55
*S&T advisor permission is required to transfer more than 69 credits toward the S&T Architectural Engineering degree.					

## Biomedical Engineering-Biomanufacturing Group 2 Major Requirements

Maryville University		Semester	Missouri S&T			
COMM 110	Public Speaking	3	SP&MS 1185	Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small>	3	
CHEM 103, 103L	General Chemistry I and Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5	
CHEM 104, 104L	General Chemistry II and Lab	4	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) <small>*CHEM 1510 is not a degree requirement, transfers as general elective credit.</small>	3	
CHEM 203, 203L	Organic Chemistry I and Lab	4	CHEM 2210, 2219	Organic Chemistry I and Lab	4	
CHEM 204, 204L or BIOL 103, 103L or BIOL 117, 117L or BIOL 260, 260L	Organic Chemistry II and Lab or Intro to Biology and Lab or General Biology and Lab or General Genetics	4	CHEM 2220, 2229 or BIO SCI 1113, 1219 or BIO SCI 2223	Organic Chemistry II and Lab or General Biology and Lab or General Genetics <small>Applies to degree as Track Elective.</small>	4	
BIOL 351, 351L	Cell Biology and Lab	4	BIO SCI 2213, 2219	Cell Biology and Lab	3	
COSC 151	Computer Science I (C++)	3	CS 1971,1981*	Intro to Programming Methodology and Lab* C++) <small>*Will be substituted for CS 1500.</small>	3	
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 9 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 3 hours Behavioral and Social Sciences. <b>*At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.</b>						
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.						
ENGL 316 or ENGL 317 or ENGL 127 or ENGL 222 or ENGL 357 or HIST 121* or HIST 122* or ART 100 or MUS 106 or	British Literature I or British Literature II or Early American Voices or American Realism and Modernism or World Literature I: The Dawn of Story or <b>American History to 1877*</b> or <b>American History Since 1877*</b> or Art Appreciation I or Music Appreciation I or <small>*Satisfies the State of Missouri government requirement.</small>	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or <b>American History to 1877*</b> or <b>American History Since 1877*</b> or Art Appreciation or Music Understanding and Appreciation <small>*Satisfies the State of Missouri government requirement.</small>	6	
Behavioral and Social Sciences Select 3 hours.						
HIST 131 or HIST 132* or EDUC 220 or PSCI 101* or PSYCH 101 or Foreign Language	World History to 1500 or <b>World History Since 1500*</b> or Economic Geography or <b>American Government*</b> or General Psychology or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	3	HISTORY 1100 or <b>HISTORY 1200*</b> or HISTORY 2110 or <b>POL SCI 1200*</b> or PSYCH 1101 or Foreign Language	Early Western Civilization or <b>Modern Western Civilization*</b> or World Regional Geography or <b>American Government*</b> or General Psychology or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	3	
<i>No free electives applied to the degree.</i>		0	Maximum Free Electives		0	
Group 2 Major Requirements		35	Group 2 Major Requirements		34	
Group 1 Core Requirements		26	Group 1 Core Requirements		26	
Total Hours		61			Total Hours*	60
<small>*S&amp;T advisor permission is required to transfer more than 69 credit hours toward the degree.</small>						

## Biomedical Engineering-Biomaterials Group 2 Major Requirements

Maryville University			Semester	Missouri S&T		
COMM 110	Public Speaking	3	SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3	
CHEM 103, 103L	General Chemistry I and Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5	
CHEM 104, 104L	General Chemistry II and Lab	4	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3	
CHEM 203, 203L	Organic Chemistry I and Lab	4	CHEM 2210, 2219*	Organic Chemistry I and Lab* *CHEM 2219 Lab applies to the degree as a Track Elective (non-engineering).	4	
CHEM 204, 204L	Organic Chemistry II and Lab	4	CHEM 2220, 2229*	Organic Chemistry II and Lab* CHEM 2229 Lab applies to the degree as a Track Elective (non-engineering).	4	
BIOL 103, 103L or BIOL 117, 117L	Intro to Biology and Lab or General Biology and Lab	4	BIO SCI 1113*, 1219*	General Biology* and Lab* *Applies to degree as Track Elective (Non-engineering).	4	
BIOL 351, 351L	Cell Biology and Lab	4	BIO SCI 2213, 2219	Cell Biology and Lab	4	
COSC 151	Computer Science I (C++)	3	CS 1971,1981*	Intro to Programming Methodology and Lab* C++ *Will be substituted for CS 1500.	3	
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 9 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 3 hours Behavioral and Social Sciences.						
*At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.						
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.						
ENGL 316 or ENGL 317 or ENGL 127 or ENGL 222 or ENGL 357 or HIST 121* or HIST 122* or ART 100 or MUS 106 or	British Literature I or British Literature II or Early American Voices or American Realism and Modernism or World Literature I: The Dawn of Story or American History to 1877* or American History Since 1877* or Art Appreciation I or Music Appreciation I or *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6	
Behavioral and Social Sciences Select 3 hours.						
HIST 131 or HIST 132* or EDUC 220 or PSCI 101* or PSYCH 101 or Foreign Language	World History to 1500 or World History Since 1500* or Economic Geography or American Government* or General Psychology or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or POL SCI 1200* or PSYCH 1101 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or American Government* or General Psychology or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3	
No free electives applied to the degree.		0	Maximum Free Electives		0	
Group 2 Major Requirements		39	Group 2 Major Requirements		39	
Group 1 Core Requirements		26	Group 1 Core Requirements		26	
Total Hours		65	Total Hours*		65	
*S&T advisor permission is required to transfer more than 69 credits toward the S&T Biomedical Engineering degree.						

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

## Ceramic Engineering Group 2 Major Requirements

Maryville University			Semester	Missouri S&T	
COMP 104 or COMM 110	Writing Across the Disciplines II: Research & Argument or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small>	3
CHEM 103, 103L	General Chemistry I and Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 104, 104L	General Chemistry II and Lab	4	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) <small>*CHEM 1510 is not a degree requirement, transfers as general elective credit.</small>	3
CHEM 203, 203L	Organic Chemistry I and Lab	4	CHEM 2210, 2219*	Organic Chemistry I (3) and Lab* (1) <small>Satisfies the advanced chemistry elective requirement. *The lab is not a degree requirement, transfers as general elective credit.</small>	3
MATH 370 AND 371	Probability I (3) AND Probability II (3) <small>The combination of MU MATH 370 and 371 is equivalent to S&amp;T STAT 3117. Both courses must be taken to receive equivalent credit.</small>	6	STAT 3117	Intro to Probability and Statistics <small>or any statistics course 3000-level or higher. Satisfies statistics elective requirement. The combination of MU MATH 370 and 371 is equivalent to S&amp;T STAT 3117. Both courses must be taken to receive equivalent credit.</small>	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. <b>*At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.</b>					
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.					
ENGL 316 or ENGL 317 or ENGL 127 or ENGL 222 or ENGL 357 or HIST 121* or HIST 122* or ART 100 or MUS 106 or	British Literature I or British Literature II or Early American Voices or American Realism and Modernism or World Literature I: The Dawn of Story or American History to 1877* or American History Since 1877* or Art Appreciation I or Music Appreciation I or <small>*Satisfies the State of Missouri government requirement.</small>	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation <small>*Satisfies the State of Missouri government requirement.</small>	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.					
HIST 131 or HIST 132* or EDUC 220 or PHIL 220 or PHIL 230 or PSCI 101* or PSYCH 101 or Foreign Language	World History to 1500 or World History Since 1500* or Economic Geography or Intro to Philosophy or Logic: Inf and Methodology or American Government* or General Psychology or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	6
Humanities, Arts, and Social Sciences Select 3 hours.					
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3	HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
No free electives applied to the degree.		0	Maximum Free Electives		0
Group 2 Major Requirements		36	Group 2 Major Requirements		32
Group 1 Core Requirements		26	Group 1 Core Requirements		26
Total Hours		62			Total Hours*
<small>*S&amp;T advisor permission is required to transfer more than 68 credits toward the S&amp;T Ceramic Engineering degree.</small>					

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

Maryville University			Semester	Missouri S&T		
COMM 110	Public Speaking	3	SP&MS 1185	Principles of Speech	3	
CHEM 103, 103L	General Chemistry I and Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5	
CHEM 104, 104L	General Chemistry II and Lab	4	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis* (2)	3	
CHEM 203, 203L	Organic Chemistry I and Lab	4	CHEM 2210, 2219*	Organic Chemistry I and Lab*	4	
CHEM 204, 204L or BIOL 351, 351L or BIOL 316, 316L	Organic Chemistry II and Lab (4) or Cell Biology and Lab (4) or General Microbiology and Lab (4) Select up to 8 hours from these options.	8	CHEM 2220 or BIO SCI 2213, 2219 or BIO SCI 3313, 3319	Organic Chemistry II (3) or Cell Biology and Lab (4) or Microbiology and Lab (5) Applies to the degree as a maximum of 8 of the 9 required science elective credits. Select up to 8 hours from these options.	8	
COSC 151	Computer Science I (C++)	3	CS 1971,1981*	Intro to Programming Methodology and Lab* C++)	3	
MATH 370 AND 371	Probability I (3) AND Probability II (3) The combination of MU MATH 370 and 371 is equivalent to S&T STAT 3117. Both courses must be taken to receive equivalent credit.	6	STAT 3117*	Intro to Probability and Statistics* *STAT 3117 will be substituted for STAT 3113. The combination of MU MATH 370 and 371 is equivalent to S&T STAT 3117. Both courses must be taken to receive equivalent credit.	3	
Humanities, Arts, and Social Sciences General Education Requirements						
From the options listed in each group below, select 12 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines.						
*At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.						
Humanities and Fine Arts						
Select 6 hours from at least two specific disciplines.						
ENGL 316 or ENGL 317 or ENGL 127 or ENGL 222 or ENGL 357 or HIST 121* or HIST 122* or ART 100 or MUS 106 or	British Literature I or British Literature II or Early American Voices or American Realism and Modernism or World Literature I: The Dawn of Story or American History to 1877* or American History Since 1877* or Art Appreciation I or Music Appreciation I or *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6	
Behavioral and Social Sciences						
Select 6 hours from at least two specific disciplines.						
HIST 131 or HIST 132* or EDUC 220 or PHIL 220 or PHIL 230 or PSCI 101* or PSYCH 101 or Foreign Language	World History to 1500 or World History Since 1500* or Economic Geography or Intro to Philosophy or Logic: Inf and Methodology or American Government* or General Psychology or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	
No free electives applied to the degree.		0	Maximum Free Electives		0	
Group 2 Major Requirements		44	Group 2 Major Requirements		41	
Group 1 Core Requirements		26	Group 1 Core Requirements		26	
Total Hours		70			Total Hours*	
*S&T advisor permission is required to transfer more than 68 credits toward the S&T Chemical Engineering degree.						

## Civil Engineering Group 2 Major Requirements

Maryville University			Semester	Missouri S&T			
COMP 104 or COMM 110	Writing Across the Disciplines II: Research & Argument or Public Speaking	3		ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small>	3	
CHEM 103, 103L	General Chemistry I and Lab	4		CHEM 1310, 1319	General Chemistry I and Lab	5	
SCI 309	Geology	4		GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3	
MATH 370 AND 371	Probability I (3) AND Probability II (3) <small>The combination of MU MATH 370 and 371 is equivalent to S&amp;T STAT 3117. Both courses must be taken to receive equivalent credit.</small>	6		STAT 3117*	Intro to Probability and Statistics* <small>*STAT 3117 will be substituted for STAT 3113. The combination of MU MATH 370 and 371 is equivalent to S&amp;T STAT 3117. Both courses must be taken to receive equivalent credit.</small>	3	
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. <b>*At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.</b>							
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.							
ENGL 316 or ENGL 317 or ENGL 127 or ENGL 222 or ENGL 357 or HIST 121* or HIST 122* or ART 100 or MUS 106 or	British Literature I or British Literature II or Early American Voices or American Realism and Modernism or World Literature I: The Dawn of Story or American History to 1877* or American History Since 1877* or Art Appreciation I or Music Appreciation I or <small>*Satisfies the State of Missouri government requirement.</small>	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation <small>*Satisfies the State of Missouri government requirement.</small>	6	
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.							
HIST 131 or HIST 132* or EDUC 220 or PHIL 220 or PHIL 230 or PSCI 101* or PSYCH 101 or Foreign Language	World History to 1500 or World History Since 1500* or Economic Geography or Intro to Philosophy or Logic: Inf and Methodology or American Government* or General Psychology or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	6		HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	6	
Humanities, Arts, and Social Sciences Select 3 hours.							
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3		HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3	
No free electives applied to the degree.		0		Maximum Free Electives		0	
Group 2 Major Requirements		32		Group 2 Major Requirements		29	
Group 1 Core Requirements		26		Group 1 Core Requirements		26	
Total Hours		58				Total Hours*	55
<small>*S&amp;T advisor permission is required to transfer more than 69 credits toward the S&amp;T Civil Engineering degree.</small>							



## Computer Engineering Group 2 Major Requirements

Maryville University			Semester	Missouri S&T		
COMM 110	Public Speaking	3	SPMS 1185	Principles of Speech	3	
CHEM 103, 103L	General Chemistry I and Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5	
COSC 151	Computer Science I (C++)	3	CS 1971,1981*	Intro to Programming Methodology and Lab* C++) *Will be substituted for CS 1500.	3	
CHEM 203, 203L or BIOL 351, 351L or BIOL 260	Organic Chemistry I and Lab or Cell Biology and Lab 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) Satisfies a required engineering/science elective.	3	
MATH 316	Applied Linear Algebra	3	MATH 3108	Linear Algebra Satisfies a required math elective.	3	
MATH 370 AND 371	Probability I (3) AND Probability II (3) The combination of MU MATH 370 and 371 is equivalent to S&T STAT 3117. Both courses must be taken to receive equivalent credit.	6	STAT 3117	Intro to Probability and Statistics The combination of MU MATH 370 and 371 is equivalent to S&T STAT 3117. Both courses must be taken to receive equivalent credit.	3	
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. *At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.						
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.						
ENGL 316 or ENGL 317 or ENGL 127 or ENGL 222 or ENGL 357 or HIST 121* or HIST 122* or ART 100 or MUS 106 or	British Literature I or British Literature II or Early American Voices or American Realism and Modernism or World Literature I: The Dawn of Story or American History to 1877* or American History Since 1877* or Art Appreciation I or Music Appreciation I or *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6	
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.						
HIST 131 or HIST 132* or EDUC 220 or PHIL 220 or PHIL 230 or PSCI 101* or PSYCH 101 or Foreign Language	World History to 1500 or World History Since 1500* or Economic Geography or Intro to Philosophy or Logic: Inf and Methodology or American Government* or General Psychology or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	
Humanities, Arts, and Social Sciences Select 3 hours.						
COMP 104	Writing Across the Disciplines II: Research & Argument	3	ENGLISH 1160	Writing and Research	3	
Electives	Maximum Free Electives	3	Electives	Maximum Free Electives	3	
	Group 2 Major Requirements	41		Group 2 Major Requirements	38	
	Group 1 Core Requirements	26		Group 1 Core Requirements	26	
	Total Hours	67		Total Hours*	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

Maryville University			Semester	Missouri S&T	
COMM 110	Public Speaking	3	SPMS 1185	Principles of Speech	3
CHEM 103, 103L	General Chemistry I and Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5
COSC 151	Computer Science I (C++)	3	CS 1971,1981*	Intro to Programming Methodology and Lab* C++)	3
CHEM 203, 203L or BIOL 351, 351L or BIOL 260	Organic Chemistry I and Lab or Cell Biology and Lab 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 AND 371	Probability I (3) AND Probability II (3) The combination of MU MATH 370 and 371 is equivalent to S&T STAT 3117. Both courses must be taken to receive equivalent credit.	6	STAT 3117	Intro to Probability and Statistics The combination of MU MATH 370 and 371 is equivalent to S&T STAT 3117. Both courses must be taken to receive equivalent credit.	3
Humanities, Arts, and Social Sciences General Education Requirements					
From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines.					
*At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.					
Humanities and Fine Arts					
Select 6 hours from at least two specific disciplines.					
ENGL 316 or ENGL 317 or ENGL 127 or ENGL 222 or ENGL 357 or HIST 121* or HIST 122* or ART 100 or MUS 106 or	British Literature I or British Literature II or Early American Voices or American Realism and Modernism or World Literature I: The Dawn of Story or American History to 1877* or American History Since 1877* or Art Appreciation I or Music Appreciation I or *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences					
Select 6 hours from at least two specific disciplines.					
HIST 131 or HIST 132* or EDUC 220 or PHIL 220 or PHIL 230 or PSCI 101* or PSYCH 101 or Foreign Language	World History to 1500 or World History Since 1500* or Economic Geography or Intro to Philosophy or Logic: Inf and Methodology or American Government* or General Psychology or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government*or General Psychology or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
Humanities, Arts, and Social Sciences					
Select 3 hours.					
COMP 104	Writing Across the Disciplines II: Research & Argument	3	ENGLISH 1160	Writing and Research	3
Electives	Maximum Free Electives	6	Electives	Maximum Free Electives	6
	Group 2 Major Requirements	44		Group 2 Major Requirements	41
	Group 1 Core Requirements	26		Group 1 Core Requirements	26
	Total Hours	70		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

Maryville University			Semester	Missouri S&T		
COMM 110	Public Speaking	3	SPMS 1185	Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small>	3	
CHEM 103, 103L	General Chemistry I and Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5	
COSC 151	Computer Science I (C++)	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3	
MATH 370 AND 371	Probability I (3) AND Probability II (3) <small>The combination of MU MATH 370 and 371 is equivalent to S&amp;T STAT 3117. Both courses must be taken to receive equivalent credit.</small>	6	STAT 3117	Intro to Probability and Statistics <small>The combination of MU MATH 370 and 371 is equivalent to S&amp;T STAT 3117. Both courses must be taken to receive equivalent credit.</small>	3	
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. <b>*At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.</b>						
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.						
ENGL 316 or ENGL 317 or ENGL 127 or ENGL 222 or ENGL 357 or HIST 121* or HIST 122* or ART 100 or MUS 106 or	British Literature I or British Literature II or Early American Voices or American Realism and Modernism or World Literature I: The Dawn of Story or <b>American History to 1877*</b> or <b>American History Since 1877*</b> or Art Appreciation I or Music Appreciation I or <small>*Satisfies the State of Missouri government requirement.</small>	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or <b>American History to 1877*</b> or <b>American History Since 1877*</b> or Art Appreciation or Music Understanding and Appreciation <small>*Satisfies the State of Missouri government requirement.</small>	6	
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines to include PSYCH 1101.						
Psych 101	General Psychology	3	PSYCH 1101	General Psychology Required	3	
HIST 131 or HIST 132* or EDUC 220 or PHIL 220 or PHIL 230 or PSYCH 101 or Foreign Language	World History to 1500 or <b>World History Since 1500*</b> or Economic Geography or Intro to Philosophy or Logic: Inf and Methodology or <b>American Government*</b> or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	3	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or Foreign Language	Early Western Civilization or <b>Modern Western Civilization*</b> or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or <b>American Government*</b> or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	3	
Humanities, Arts, and Social Sciences Select 3 hours.						
COMP 104	Writing Across the Disciplines II: Research & Argument	3	ENGLISH 1160	Writing and Research	3	
<i>No free electives applied to the degree.</i>		0	Electives	Maximum Free Electives	0	
Group 2 Major Requirements		31		Group 2 Major Requirements	29	
Group 1 Core Requirements		26		Group 1 Core Requirements	26	
Total Hours		57			Total Hours*	61
<small>*S&amp;T advisor permission is required to transfer more than 61 credits toward the S&amp;T Engineering Management degree.</small>						

## Environmental Engineering Group 2 Major Requirements

Maryville University			Semester	Missouri S&T		
COMP 104 or COMM 110	Writing Across the Disciplines II: Research & Argument or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small>	3	
SCI 309	Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3	
CHEM 103, 103L	General Chemistry I and Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5	
CHEM 104, 104L	General Chemistry II and Lab	4	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) <small>*CHEM 1510 is not a degree requirement, transfers as general elective credit.</small>	3	
BIOL 103, 103L or BIOL 117, 117L	Intro to Biology and Lab or General Biology and Lab	4	BIO SCI 1113, 1219*	General Biology (3) and Lab* (1) <small>*The lab is not a degree requirement, transfers as general elective credit.</small>	3	
MATH 370 AND 371	Probability I (3) AND Probability II (3) <small>The combination of MU MATH 370 and 371 is equivalent to S&amp;T STAT 3117. Both courses must be taken to receive equivalent credit.</small>	6	STAT 3117*	Intro to Probability and Statistics* <small>*STAT 3117 will be substituted for STAT 3113. The combination of MU MATH 370 and 371 is equivalent to S&amp;T STAT 3117. Both courses must be taken to receive equivalent credit.</small>	3	
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 12 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. <b>*At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.</b>						
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.						
ENGL 316 or ENGL 317 or ENGL 127 or ENGL 222 or ENGL 357 or HIST 121* or HIST 122* or ART 100 or MUS 106 or	British Literature I or British Literature II or Early American Voices or American Realism and Modernism or World Literature I: The Dawn of Story or American History to 1877* or American History Since 1877* or Art Appreciation I or Music Appreciation I or <small>*Satisfies the State of Missouri government requirement.</small>	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation <small>*Satisfies the State of Missouri government requirement.</small>	6	
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines to include HISTORY 1200						
HIST 132*	World History Since 1500* <small>*Satisfies the State of Missouri Government requirement.</small>	3	HISTORY 1200*	Modern Western Civilization* <small>*Satisfies the State of Missouri Government requirement.</small>	3	
PHIL 220 or PHIL 230 or PSCI 101* or PSYCH 101 or Foreign Language	Intro to Philosophy or Logic: Inf and Methodology or American Government* or General Psychology or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	3	PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or Foreign Language	Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	3	
No free electives applied to the degree.		0	Maximum Free Electives		0	
Group 2 Major Requirements		37	Group 2 Major Requirements		32	
Group 1 Core Requirements		26	Group 1 Core Requirements		26	
Total Hours		63			Total Hours*	58
<small>*S&amp;T advisor permission is required to transfer more than 69 credits toward the S&amp;T Environmental Engineering degree.</small>						

## Geological Engineering Group 2 Major Requirements

Maryville University			Semester	Missouri S&T		
CHEM 103, 103L	General Chemistry I and Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5	
COSC 151	Computer Science I (C++)	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3	
SCI 309	Geology	4	GEO ENG 1150 (GEOLOGY 1110)	Physical and Environmental Geology	3	
MATH 370 AND 371	Probability I (3) AND Probability II (3) The combination of MU MATH 370 and 371 is equivalent to S&T STAT 3117. Both courses must be taken to receive equivalent credit.	6	STAT 3117*	Intro to Probability and Statistics* *STAT 3117 will be substituted for the statistics requirement. The combination of MU MATH 370 and 371 is equivalent to S&T STAT 3117. Both courses must be taken to receive equivalent credit.	3	
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. <b>*At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.</b>						
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.						
ENGL 316 or ENGL 317 or ENGL 127 or ENGL 222 or ENGL 357 or HIST 121* or HIST 122* or ART 100 or MUS 106 or	British Literature I or British Literature II or Early American Voices or American Realism and Modernism or World Literature I: The Dawn of Story or American History to 1877* or American History Since 1877* or Art Appreciation I or Music Appreciation I or *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6	
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.						
HIST 131 or HIST 132* or EDUC 220 or PHIL 220 or PHIL 230 or PSCI 101* or PSYCH 101 or Foreign Language	World History to 1500 or World History Since 1500* or Economic Geography or Intro to Philosophy or Logic: Inf and Methodology or American Government* or General Psychology or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	
Humanities, Arts, and Social Sciences Select 3 hours.						
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3	HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3	
No free electives applied to the degree.		0	Maximum Free Electives		0	
Group 2 Major Requirements		32	Group 2 Major Requirements		29	
Group 1 Core Requirements		26	Group 1 Core Requirements		26	
Total Hours		58	Total Hours*		55	
*S&T advisor permission is required to transfer more than 65 credits toward the S&T Geological Engineering degree.						

## Mechanical Engineering Group 2 Major Requirements

Maryville University			Semester	Missouri S&T	
COMP 104 or COMM 110	Writing Across the Disciplines II: Research & Argument or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech <i>Applies to degree as Gen Ed Communication requirement.</i>	3
CHEM 103, 103L	General Chemistry I and Lab	4	CHEM 1310*, 1319	General Chemistry I and Lab <i>*CHEM 1310 will be substituted for CHEM 1305.</i>	5
COSC 151	Computer Science I (C++)	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
MATH 316	Applied Linear Algebra	3	MATH 3108	Linear Algebra I <i>Will satisfy the Advanced Math/Statistics elective requirement.</i>	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. <b>*At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.</b>					
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.					
ENGL 316 or ENGL 317 or ENGL 127 or ENGL 222 or ENGL 357 or HIST 121* or HIST 122* or ART 100 or MUS 106 or	British Literature I or British Literature II or Early American Voices or American Realism and Modernism or World Literature I: The Dawn of Story or American History to 1877* or American History Since 1877* or Art Appreciation I or Music Appreciation I or <i>*Satisfies the State of Missouri government requirement.</i>	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation <i>*Satisfies the State of Missouri government requirement.</i>	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.					
HIST 131 or HIST 132* or EDUC 220 or PHIL 220 or PHIL 230 or PSCI 101* or PSYCH 101 or Foreign Language	World History to 1500 or World History Since 1500* or Economic Geography or Intro to Philosophy or Logic: Inf and Methodology or American Government* or General Psychology or Elementary or Intermediate Foreign Language <i>*Satisfies the State of Missouri government requirement.</i>	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Elementary or Intermediate Foreign Language <i>*Satisfies the State of Missouri government requirement.</i>	6
Humanities, Arts, and Social Sciences Select 3 hours.					
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3	HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
		No free electives applied to the degree.		Maximum Free Electives	0
		Group 2 Major Requirements		Group 2 Major Requirements	29
		Group 1 Core Requirements		Group 1 Core Requirements	26
		Total Hours	54		Total Hours* 55
<i>*S&amp;T advisor permission is required to transfer more than 68 credits toward the S&amp;T Mechanical Engineering degree.</i>					

## Metallurgical Engineering Group 2 Major Requirements

Maryville University			Semester	Missouri S&T	
COMP 104 or COMM 110	Writing Across the Disciplines II: Research & Argument or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small>	3
MATH 370 AND 371	Probability I (3) AND Probability II (3) <small>The combination of MU MATH 370 and 371 is equivalent to S&amp;T STAT 3117. Both courses must be taken to receive equivalent credit.</small>	6	STAT 3117*	Intro to Probability and Statistics* <small>*Will be substituted for the STAT 3113/3115 requirement. The combination of MU MATH 370 and 371 is equivalent to S&amp;T STAT 3117. Both courses must be taken to receive equivalent credit.</small>	3
CHEM 103, 103L	General Chemistry I and Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 104, 104L	General Chemistry II and Lab	4	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) <small>*CHEM 1510 is not a degree requirement, transfers as general elective credit.</small>	3
CHEM 203, 203L	Organic Chemistry I and Lab	4	CHEM 2210, 2219*	Organic Chemistry I (3) and Lab* (1) <small>CHEM 2210 is not specifically required for the degree but will satisfy Out-of-Department Technical Elective Requirement. *CHEM 2219 is not an S&amp;T degree requirement, will transfer as general elective credit.</small>	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. <b>*At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.</b>					
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.					
ENGL 316 or ENGL 317 or ENGL 127 or ENGL 222 or ENGL 357 or HIST 121* or HIST 122* or ART 100 or MUS 106 or	British Literature I or British Literature II or Early American Voices or American Realism and Modernism or World Literature I: The Dawn of Story or American History to 1877* or American History Since 1877* or Art Appreciation I or Music Appreciation I or <small>*Satisfies the State of Missouri government requirement.</small>	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation <small>*Satisfies the State of Missouri government requirement.</small>	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.					
HIST 131 or HIST 132* or EDUC 220 or PHIL 220 or PHIL 230 or PSCI 101* or PSYCH 101 or Foreign Language	World History to 1500 or World History Since 1500* or Economic Geography or Intro to Philosophy or Logic: Inf and Methodology or American Government* or General Psychology or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	6
Humanities, Arts, and Social Sciences Select 3 hours.					
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3	HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
		3			3
		39			35
		26			26
Total Hours		65			Total Hours*
<small>*S&amp;T advisor permission is required to transfer more than 68 credits toward the S&amp;T Metallurgical Engineering degree.</small>					

## Mining Engineering Group 2 Major Requirements

Maryville University			Semester	Missouri S&T	
COMP 104 or COMM 110	Writing Across the Disciplines II: Research & Argument or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech <i>Applies to degree as Gen Ed Communication requirement.</i>	3
MATH 370 AND 371	Probability I (3) AND Probability II (3) <i>The combination of MU MATH 370 and 371 is equivalent to S&amp;T STAT 3117. Both courses must be taken to receive equivalent credit.</i>	6	STAT 3117*	Intro to Probability and Statistics* <i>*Will be substituted for the STAT 3113/3115 requirement. The combination of MU MATH 370 and 371 is equivalent to S&amp;T STAT 3117. Both courses must be taken to receive equivalent credit.</i>	3
CHEM 103, 103L	General Chemistry I and Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5
SCI 309	Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 12 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. <b>*At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.</b>					
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.					
ENGL 316 or ENGL 317 or ENGL 127 or ENGL 222 or ENGL 357 or HIST 121* or HIST 122* or ART 100 or MUS 106 or	British Literature I or British Literature II or Early American Voices or American Realism and Modernism or World Literature I: The Dawn of Story or <b>American History to 1877*</b> or <b>American History Since 1877*</b> or Art Appreciation I or Music Appreciation I or <i>*Satisfies the State of Missouri government requirement.</i>	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or <b>American History to 1877*</b> or <b>American History Since 1877*</b> or Art Appreciation or Music Understanding and Appreciation <i>*Satisfies the State of Missouri government requirement.</i>	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.					
HIST 131 or HIST 132* or EDUC 220 or PHIL 220 or PHIL 230 or PSCI 101* or PSYCH 101 or Foreign Language	World History to 1500 or <b>World History Since 1500*</b> or Economic Geography or Intro to Philosophy or Logic: Inf and Methodology or <b>American Government*</b> or General Psychology or Elementary or Intermediate Foreign Language <i>*Satisfies the State of Missouri government requirement.</i>	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or Foreign Language	Early Western Civilization or <b>Modern Western Civilization*</b> or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or <b>American Government*</b> or General Psychology or Elementary or Intermediate Foreign Language <i>*Satisfies the State of Missouri government requirement.</i>	6
<i>No free electives applied to the degree.</i>		0	Maximum Free Electives		0
Group 2 Major Requirements		29	Group 2 Major Requirements		26
Group 1 Core Requirements		26	Group 1 Core Requirements		26
Total Hours		55			Total Hours*
<i>*S&amp;T advisor permission is required to transfer more than 68 credits toward the S&amp;T Mining Engineering degree.</i>					



## Nuclear Engineering Group 2 Major Requirements

Maryville University			Semester	Missouri S&T		
COMP 104 or COMM 110	Writing Across the Disciplines II: Research & Argument or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small>	3	
CHEM 103, 103L	General Chemistry I and Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5	
COSC 151	Computer Science I (C++)	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 AND 371	Probability I (3) AND Probability II (3) <small>The combination of MU MATH 370 and 371 is equivalent to S&amp;T STAT 3117. Both courses must be taken to receive equivalent credit.</small>	6	STAT 3117	Intro to Probability and Statistics	3	
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 12 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 3 hours Behavioral and Social Sciences. <b>*At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.</b>						
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.						
ENGL 316 or ENGL 317 or ENGL 127 or ENGL 222 or ENGL 357 or HIST 121* or HIST 122* or ART 100 or MUS 106 or	British Literature I or British Literature II or Early American Voices or American Realism and Modernism or World Literature I: The Dawn of Story or American History to 1877* or American History Since 1877* or Art Appreciation I or Music Appreciation I or *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6	
Behavioral and Social Sciences Select 3 hours.						
HIST 131 or HIST 132* or EDUC 220 or PHIL 220 or PHIL 230 or PSCI 101* or PSYCH 101 or Foreign Language	World History to 1500 or World History Since 1500* or Economic Geography or Intro to Philosophy or Logic: Inf and Methodology or American Government* or General Psychology or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3	
Humanities, Arts, and Social Sciences Select 3 hours.						
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3	HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3	
Maximum Free Electives		0	Maximum Free Electives		0	
Group 2 Major Requirements		31	Group 2 Major Requirements		29	
Group 1 Core Requirements		26	Group 1 Core Requirements		26	
Total Hours		57			Total Hours*	
*S&T advisor permission is required to transfer more than 69 credits toward the S&T Nuclear Engineering degree.						

## Petroleum Engineering Group 2 Major Requirements

Maryville University		Semester	Missouri S&T		
COMP 104 or COMM 110	Writing Across the Disciplines II: Research & Argument or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small>	3
CHEM 103, 103L	General Chemistry I and Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5
SCI 309	Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. <b>*At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.</b>					
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.					
ENGL 316 or ENGL 317 or ENGL 127 or ENGL 222 or ENGL 357 or HIST 121* or HIST 122* or ART 100 or MUS 106 or	British Literature I or British Literature II or Early American Voices or American Realism and Modernism or World Literature I: The Dawn of Story or American History to 1877* or American History Since 1877* or Art Appreciation I or Music Appreciation I or <small>*Satisfies the State of Missouri government requirement.</small>	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation <small>*Satisfies the State of Missouri government requirement.</small>	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.					
HIST 131 or HIST 132* or EDUC 220 or PHIL 220 or PHIL 230 or PSCI 101* or PSYCH 101 or Foreign Language	World History to 1500 or World History Since 1500* or Economic Geography or Intro to Philosophy or Logic: Inf and Methodology or American Government* or General Psychology or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	6
Humanities, Arts, and Social Sciences Select 3 hours.					
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3	HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
No free electives applied to the degree.		0	Maximum Free Electives		0
Group 2 Major Requirements		26	Group 2 Major Requirements		26
Group 1 Core Requirements		26	Group 1 Core Requirements		26
Total Hours		52	Total Hours*		52
<small>*S&amp;T advisor permission is required to transfer more than 69 credits toward the S&amp;T Petroleum Engineering degree.</small>					